DR. ALFRED P. SOUTHWICK.

EXCLUSIVE CONTRIBUTIONS

Voice and Enunciation.

The Singing Voice and Speaking Voice as Influenced by Irregularity of the Teeth.

By Robert Eugene Payne, M.D., D.D.S., New York.

A lisp in the speaking voice or any restraint, to disguise a deformity of the natural teeth, results in a loss to the singer. A lisp may be caused by so slight a disfigurement as the malposition of one or two teeth.

This condition also blights eloquence due to imperfect enunciation, and prevents the full effect of words and gestures, in an effort to cover up a deformity, though that deformity be slight.

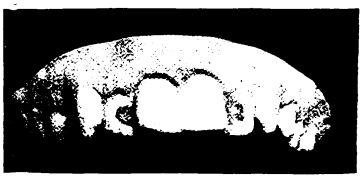


Fig. 1.

The three cases reported below are adults, neglected in early youth. The teeth involve conditions not often corrected in the manner described in this article.

Case No. 1. Miss A., age 26, the possessor of a contralto voice of unusual quality. A lisp was very noticeable in the speaking voice and this was carried into the singing voice.

The two superior laterals were inside the arch as shown by Fig. 1.

Both malposed teeth were dark, because it was impossible to reach them with a tooth brush in their crowded condition. They were disfig-

ured by two large approximal gold fillings that were always in evidence, as is shown in Fig. 1.

The position of the laterals caused a space between the upper and lower teeth, where the laterals should have occluded when the jaws were closed.

The letter "S" was imperfectly sounded, in an effort on the part of the patient to close this space with the tip of the tongue, and a very pronounced lisp was the result.

Treatment.

See Fig. 1 at the beginning, Fig. No. 2 and Fig. A from photograph, when dismissed.

The four front teeth were large. Their crowded position accounts for the approximal cavities and gold fillings.

By separating the teeth slightly with a bow separator and removing approximally about the thickness of a piece of writing paper from both sides of each of the anterior teeth, twelve surfaces, I gained enough room to bring the tooth in position, and at the same time thoroughly clean out

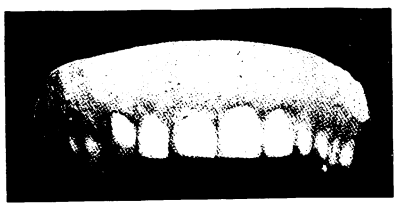


FIG. 2.

the spaces, removing all stains and reducing the width of the teeth, and thereby the fan shapes.

I bound the two bicuspids and canine together with "D" silk twist, and then by running a thread from the two bicuspids, over the canine, and under the malposed lateral incisor, I drew the two laterals in position, one at a time.

The three side teeth, being bound together, gave me strength, and the leverage over the canine, combined with the shrinking of the twisted strand, was sufficient to move the lateral a little every day. The threads were renewed about three times a week. It is always necessary to tie square knots, and the thread must be taut.

Both teeth were in correct position in less than sixty days. At the beginning of the treatment I placed a very thin spring plate in the mouth,

extending back as far as the first molar to support the side teeth, and this gave me still more strength and leverage to move the front teeth forward.

I took out two large gold fillings and replaced them with enamel inlays, the half moon English inlays put up in all sizes, that taper to a point, so that a cavity may be fitted accurately, by cutting off at a point that will approximate the size of the cavity.

FIG. A.

The laterals were securely locked in position by slightly increasing the size of some small gold fillings in the anterior teeth at their lingual approximate surfaces.

Note the result in Fig. A.

The teeth have a clean, glistening appearance, are regular and symmetrical. There is an entire absence of the lisp.

Case No. 2. Miss B., a singer famous on both continents. The patient tried many times to induce her family dentist to correct the position of a lower central incisor, projecting beyond the normal arch, but he always evaded the case and soothed her by calling it a "character" tooth. This one tooth being out of position resulted in the appearance of a number of teeth being out of position.

Treatment. (See Fig. 3.) I reduced the size of the four lower incisors slightly, as described in the first case, and drew the tooth in position in the arch in three weeks by means of fine silk thread, C and D silk twist. The two bicuspids were

FIG. 3.

bound together on each side for strength. I then passed the thread around the second bicuspid, brought it between the lateral and central inside and carried it over to the opposite side of the second bicuspid. To tighten the thread, I bound it by cross threads to the teeth on either side, thus drawing the thread out of the way of the tongue and tightening it.

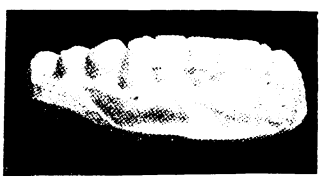


FIG. 4.

After the central incisor was drawn in position in the normal arch, I stoned the tops of all the lower teeth, using a fine stone in a stream of water, then rounded up the corners with a fine disk, bound them all in position by means of double "oo" silk and held them there for thirty days, renewing the threads probably every ten days, tying low on the bicuspids and high on the anterior to bind them all securely in position.

At the end of this time I securely locked the central incisor that was moved into position, by putting in a small gold filling in the labial approximal aspect of the adjoining lateral incisor.

The result is shown in Fig. 4. This singer is one of the most prominent in New York, has toured through Europe a number of times, and later the United States several times.

The charm of the face is enhanced by the regularity of the teeth, the restraint she has labored under is gone, and there is perfect freedom.

Case No. 3. Miss B., age 25. Projecting front teeth shown in Fig. 5 and Fig. B, from photograph.

The patient had been suffering from chronic alveolitis for a number of years; the upper left canine had been extracted in childhood by mistake. The tooth had erupted high up, the upper jaw contracted, or did not develop fully, after its extraction, and the lower arch being full, forced the upper teeth out of position until the protrusion was so pronounced that the teeth could not be covered by the lip. Pus discharged from five or six pockets.

FIG. 5.

Notice in Fig. 5 that the bicuspids on the left side strike outside the arch, and the two central incisors were not only pushed forward, but to the right. There was no evidence of serumal calculus about the roots; three of the teeth were quite loose.

Treatment. This case was corrected by replantation, transplantation, implantation and amputation. Further the case was treated by devitalizing the pulps of three molars and treating the pus pockets with lactic acid, carbolic acid and resorcin. In the surgical treatment of this case I proceeded as follows:

The two left bicuspids were discharging pus copiously and were so far out of position that it was useless to try and draw them into the arch by any regulating appliances. I extracted both bicuspids, reamed out

FIG. C.

FIG. B.

the sockets lingually, and after removing contents of the pulp chamber and filling the crown and root, I replaced one in the arch so that it would occlude with the lower teeth, in the normal manner.

In place of the first bicuspid that I extracted, I transplanted a perfectly sound cuspid, bringing it in the arch in proper position by reaming out the socket lingually. The left superior lateral was in normal position. The left superior central projecting forward and to the right, in a very much distorted position. This tooth I devitalized, and cut off even with the margin of the gum, cut out a "V"-shape piece to permit the crown of this natural tooth to be fitted to its own root in the mouth at the proper angle. The crown cut off and the root in the mouth were united by fitting a gold wire in the root, bending it to right angle and cementing the natural crown back on its own root in the normal position in line with the adjoining lateral.

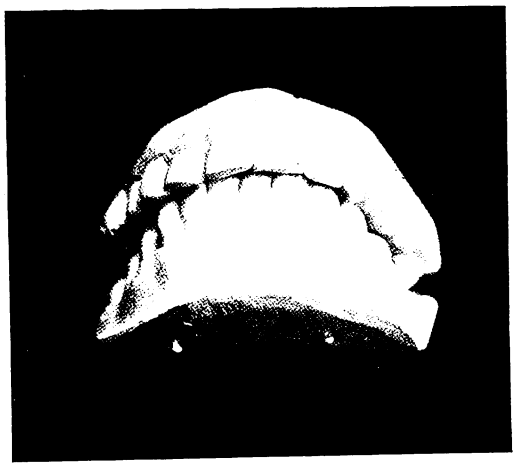


FIG. 6.

The right superior central was so loose that I extracted it, treated the socket, and allowed it to entirely heal. At the end of sixty days I used the palatine root of a sound mature molar, fitted a Logan central incisor to this root and implanted it in the space.

I cut two flaps, the anterior long and posterior short; the long flap was brought forward to fill up deficiency due to shrinkage of the process. In order to thoroughly imbed a root, I use a small one to make it as lasting as possible; I use a mature hard tooth, extracted from a patient fifty to sixty years of age; they last much longer than young, soft teeth. Note the result in this case, Fig. 6 and Fig. C, from photograph at the time the patient was dismissed.

This patient positively refused a bridge or to wear a plate, and insisted that her own natural teeth must be preserved. The plan of treatment I followed was the only way to secure this result.

Precautions in Implanting.

By the use of a two per cent. solution of cocaine, the operations were quite painless, and I have a record of many cases of implantation, transplantation and replantation of several years' standing, perfect in color, serviceable, comfortable as any teeth in the mouth. In all these cases the teeth have a fair chance for years of usefulness if every precaution is taken at the time of operating. Splinting by means of gold bands, plates, etc., are useless, and the teeth become infected. There is only one way to ligate these teeth, and that is by means of fine silk thread.

If you tie low on the adjoining teeth and high on implanted teeth, tie square knots, or a surgeon's knot and two granny knots and draw the thread taut, but not too tight, it will hold the teeth securely in position.

It becomes rigid, held by gomphosis, a pseudo-ankylosis, a close adaptation, not by actual bony union. I say every precaution should be taken, I mean every surgical precaution to prevent infection in the new socket; instruments, hands, tooth and all should be sterilized. Mature firm roots must be used and always smaller than the original root extracted.

After the extraction of a tooth, shrinkage of the process always takes place to a greater or less extent and the space or socket will never be large enough to permit the return of a tooth or root of the original size, consequently a smaller root must invariably be used. I prefer to select a lateral root or the palatine root of a molar in nearly every case and by cutting off the natural crown and fitting a porcelain, I am enabled to shorten the root without cutting off the end, and when implanted, it is completely surrounded by bony tissue. No gum should be cut away. Two flaps must be cut in every case and the gum laid back, after injecting it carefully on both sides with a two per cent. solution of cocaine, or what is better, eucaine.

Proper drills must invariably be used, and the roots of the adjoining teeth taken as a guide as to direction in cutting the socket; great care must be taken that the labial or lingual thin plates are not cut through. Many implantations look all right when the tooth is in position, but you will find on careful inspection that a "V"-shaped space has been cut, either in process or bone, anteriorly or posteriorly, or both, and the tooth is simply pushed up in the "V"-shaped space, the lingual or the labial part of the root implanted being simply covered by gum. It looks all right but it simply forms a pocket for infection at some future time. If the socket is cut in the bone, the tooth snugly fitted therein and securely

ligated by means of silk thread, it will become firm if there is no infection, or if infection takes place it can be corrected by sterilizing the socket.

Once a tooth has become firm and rigid, if it is not allowed to occlude with the lower teeth to cause traumatism, it may be firm and useful for years. The chances for success are greatly in favor of single spaces, where one tooth is to be replaced, and where a plate or bridge would be disfiguring.

So far as I am able to ascertain, the plan of treatment followed in all the above operations originated in part with Dr. Wm. J. Younger, of San Francisco, now of Chicago; slight changes being made only in some instances to meet the requirements of the case.

When Dr. Younger first originated the operation of cutting a new socket in the jaw after it had completely healed, the courtesy was extended me of witnessing and assisting in many of his early operations eleven years ago.

The knowledge gained at that time, and subsequent opportunities of examining cases and following up the results led me into many of the methods.

In speaking of Dr. Younger's operations, I mean implantation and the double flap.

Also his method of reducing the size of the tooth approximately and devitalizing when necessary to gain pleasing effects by amputation.

Very particularly do I wish to give him credit for teaching me the value of his system of knots, in the use of fine silk thread, in minor cases, in irregularity, as aids in bringing the teeth into position. Many times this has enabled me to do away with bands and gold wires.

It may be truly said of his system that it is very properly called the "artistic treatment of the natural teeth."

It is scarcely necessary for me to add that this work can only be done conservatively with great care and judgment and is confined almost exclusively to adult teeth, though it may be used to advantage in a limited degree in young people for the purpose of clearing out approximal spaces.

Christian Science in Dentistry.

By CHAS. L. VAN FOSSEN, D.D.S., Kansas City, Mo.

For some time past it has seemed to me that the subject of Christian Science should be presented to the dental profession, and I have eagerly scanned the journals monthly, with the hope that someone better qualified than I had given us a paper on this subject, but, being disappointed, and feeling that this is a matter which would be of great benefit to all dentists in their daily work, I therefore beg the privilege of giving my experience in the hope that it may be the means of causing many to investigate, and thereby to profit as I have done.

Intemperance Cured by Christian Science.

A little less than two years ago the subject of Christian Science was suggested to me as a possible means of relief from alcoholism, the habit having such a hold on me that I was unable to do without my regular potion, and, having relapsed from a course of treatment by the gold cure, I had fallen into that state of abject helplessness known only to the alcohol slave. I had no faith whatever in Christian Science when it was presented to me, but told a friend that if he thought he could assist me he might treat me, as I earnestly desired to rid myself of the habit, or disease. He told me he would take up the case. A few evenings later he called at my home and gave me an idea of what Christian Science is, and it was then that I first noticed that in the last few days I had been more moderate than for some time previous with my drinking, but did not remark so to him. From this time on the desire for alcohol gradually left me, and shortly thereafter when I took an inventory of myself, I found that for days I had had no desire to take a drink, and then it fully dawned on me that my friend with his Christian Science had done the work.

While being treated for the liquor habit my taste for tobacco gradually left me, after having been an habitual smoker and chewer for over ten years. From the time I arose in the morning till I retired at night, except at meals, I had tobacco in my mouth. This desire left me under Christian Science treatment and has never returned.

This liberation from bondage caused me to look into Christian Science, and, while it was so different from any line of thought I had ever investigated, I soon learned that just in proportion as I understood it, that far could I demonstrate or prove its teachings, provided I earnestly and conscientiously lived and practiced it and adhered to its

fundamental rules. I began to see that I was simply a child with a new study, and that I must not expect to solve all the difficult problems till I had graduated away from its basic principles.

For a period of over four years I had worn glasses for astigmatism, and was compelled to close up the office whenever an accident to my glasses occurred, necessitating repairs, it invariably throwing me into a severe sick headache. My eyes would run water till I could not keep the lids open in the light at all. Through Christian Science treatment, I removed my glasses and since that time, over a year ago, have had perfect eyes. I never think of shielding them day or night.

Christian Science Helpful in Dental Practice.

The application of Christian Science to the practice of dentistry, I at first thought one of the impossibilities, but with my little understanding, I desire to say that it applies better than I could have even hoped for. It has enabled me to do more work, do it better and with less fatigue, than I ever did before.

It has enabled me to allay the fear of my patients to that extent that I hardly know what it is to have an irritated and troublesome patient in the chair. In the handling of children I operate with almost as much ease as with the ordinary adult, provided I can have the child away from the parents, who generally insist on standing at the chair, forcing the child into the idea that the work is very painful.

There is nothing harder for the dentist to meet than worry, irritability or fretfulness, whether in yourself or in the patient, for, in either case, the condition is reflected to the other. Some trivial happening will disturb your equanimity and before you know it everything goes wrong. Your gold balls on you, your instrument slips and you puncture the dam, when a large filling is only half completed.

Your assistant does not do anything right—generally she can anticipate your wants, but now she gets just the things you don't want and has misplaced the things you need most.

These are a few of the conditions which seem to surround us, and we find ourselves either compelled to dismiss the patient to return and finish the operation another time, or we complete the work in an unsatisfactory manner, and then find ourselves in a state of complete collapse.

This state of mind, and that is all it is, a state of mind, is met by the Christian Scientist before it becomes magnified into a great reality, and the illusion is dispelled. Not by a senseless denial that "nothing ails me," as the manifestation of sickness of both mind and body is just as real to the Christian Scientist from a material standpoint as it is to you, and he knows full well the suffering you undergo; but from the Spiritual standpoint he sees the utter unreality of the condition, and he goes to

work with his understanding of the rules with as much certainty of the result as you do when applying the simplest rule in arithmetic, and is able to obtain the correct result just in proportion to his knowledge and application of such rules.

Every case that is brought to Christian Science is not healed, for the same reason that every man who attends dental college does not make a dentist.

Christian Science has been the means of not only releasing me from the bondage of appetite, but has also shown me the way to be contented and happy, and to keep so, and it is with great pleasure that I say to my brother practitioners of dentistry that if you are not satisfied in every way with your condition, either physical or mental, procure a copy of "Science and Health, With Key to the Scriptures," by Mary Baker Eddy, the text book of Christian Science, give it careful study, and you will receive the same blessing that I have.

Donations to the Army and Navy Museum.

(Continued from page 484.)

Mr. M. S. Towner, superintendent of S. S. White Dental Depot, New York City, makes the following donations:

FIG. 11.

FIG. 12.

FIG. 13.

FIG. 14.

FIG. 15.

No. 25. A central and lateral incisor confluent throughout. (Fig. 11);

No. 26. A multi-rooted molar. (Fig. 12);

No. 27. Double rooted cuspid. (Fig. 13);

Dr. E. M. Murlless, of University Place, Nebraska, makes the following donations:

No. 28. Second molar, third molar attached to the extremity of the root. (Fig. 14);

No. 29. A perfectly formed supernumerary bicuspid. (Fig. 15);

No. 30. Supernumerary with extraordinarily long root. (Fig. 16);

No. 31. Molar with extraordinary deposit of salivary calculus. (Fig. 17);

No. 32. Double rooted canine. (Fig. 18);

No. 33. Three-rooted bicuspid. (Fig. 19);

No. 34. Peculiar four-rooted molar. (Fig. 20);

FIG. 16.

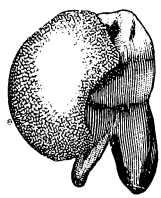


FIG. 17.

FIG. 18.

FIG. 19.

FIG. 20.

No. 35. Two molars and two incisors removed from an adult female, twenty-five years of age. These teeth appear like the abraded teeth of old age, but erupted in practically their present form, this patient having all the teeth of the upper and lower jaw of this anomalous character, being practically without crowns. (Fig. 21);

FIG. 21

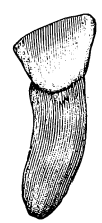


FIG. 22.

No. 36. A number of anomalous teeth, showing peculiar formations of their roots.

No. 37. Extraordinary central incisor, the root of peculiar form, the crown being partly lost by abrasion. (Fig. 22);

Dr. E. L. Jones, of Waterville, Me., donates the following:

No. 38. Eight anomalous teeth, the most interesting being two molars and one bicuspid, having the extremities of the roots turned almost at right angles.

Dr. Chas. Nevitte Gibbons, of New Orleans, La., donates

No. 39. Model showing apparatus devised by him to cure a case of somniloquoy, a full description of which will be found in ITEMS OF INTEREST for 1897, page 865. (Fig. 23).

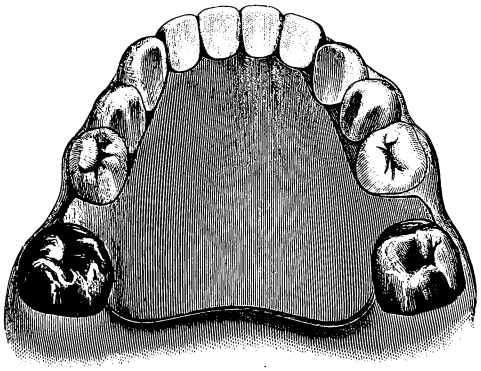


FIG. 23.

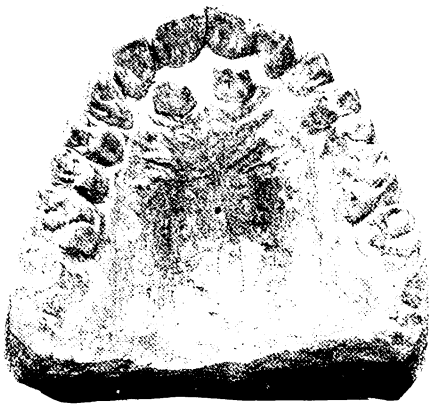


FIG. 24.

Dr. M. E. Le Galley, of Norwalk, O., donates

No. 40. Three pairs of articulated models of mouths in the Indiana school for the feeble minded. They show irregularities and conditions of the palate and jaws of degenerates.

SOCIETY PAPERS

Contributary Causes of Antrum Disease.

By DWIGHT L. HUBBARD, M.D.

Read before the Central Dental Association of Northern New Jersey, May, 1898.

The antrum of Highmore should be considered as one of the most important structures in the face, liable to many distressing affections, many times not recognized and bearing an important relation to chronic catarrhal difficulties which render life miserable.

I would not magnify unduly the affections which are liable to attack the mucous membranes continuous with the antrum as well as the antrum itself, but I do desire to call attention to the fact that trouble in this sinus is very much more common than is supposed. It is of simple inflammations that I wish particularly to speak.

That pain in the teeth contiguous to the antrum may exist without real trouble with the pulp or any of the different parts of the tooth structures, is a demonstrated fact, and I speak of these difficulties from the standpoint of a rhinologist, rather than from that of the dentist or oral surgeon.

"Protect us from our friends" is an old saying, but is particularly applicable here. Toothache in this region does not always signify that the tooth should be interfered with. I would, before the tooth is opened, have you investigate other conditions and ascertain whether an extended inflammation from the nasal membranes to the mucous membrane of the antrum through the ostium is not a contributing cause. It is not necessary that the tooth socket should project through the alveolar process as far as the antrum in order to have pain with antral inflammation. Sympathetic or reflected pain may be reduced in a first or second molar by means of an intense inflammation of the antrum, though it be only the result of irritation through nerve anastomosis or by ganglionic reflex. Pain in these teeth does not always signify the presence of pericementitis or other local difficulties. In such a case no results would

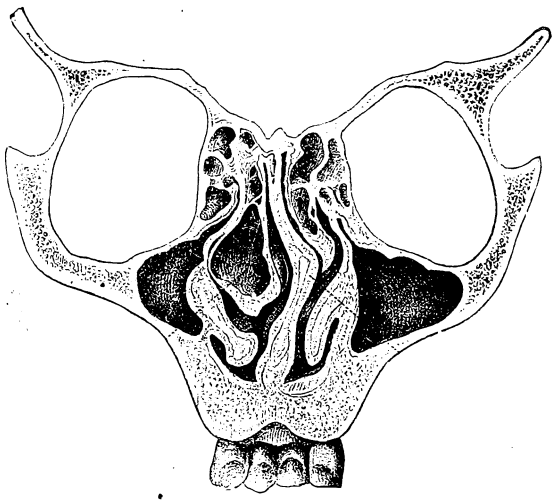
follow the use of the usual treatment, but (experimentally) pain will be relieved at once by means of a 2 per cent. solution of cocaine sprayed into the nasal cavity and the chambers thoroughly and antiseptically cleansed and treated, both locally and constitutionally. I do not speak of the use of cocaine as a means of treatment, but to illustrate the fact that by its effect upon the vaso-motors of the turbinated bodies of the nose, the antrum will be exposed, thus permitting an easy access to the antral cavity, and also to demonstrate the fact that in a state of acute inflammation the sinus is closed and the products of inflammation are pent up within it, thus preventing not only exit of the products of inflammation, but any possibility of the aeration of the cavity, which I believe to be a necessity to the proper restoration to a healthy condition.

Relation of Antrum to Contiguous Territories.

Let me illustrate the relation existing between the nasal and all the continuous and contiguous membranes of these fossæ and cavities. Headache is caused generally by a vaso-motor disturbance producing stasis, congestion, hyperæmia, etc. Whether it be caused by intra-nasal pressure or not, the use of cocaine will, by contracting the blood vessels locally, as also acting generally upon the whole circulatory system, relieve the consequent headache, in the two ways indicated, viz.: by reflex action from the intra-nasal relief and by its general effect. Headache of the ordinary congestive type will be relieved in this way when there is no congestion of the nasal membranes. So much the closer then is the relation between these membranes and the interior of the antral cavity. I take this means of illustrating this principle because it at the same time proves the pathological relationship between them. Teeth have been sacrificed because this fact has not been recognized. It it quite as important to investigate the nasal fossæ for etiological factors in cases where the tooth structures are in a healthy condition, as it is to ascribe the obscure cause to a neuritis or to trouble within the tooth which it is supposed has not manifested itself in inflammatory disturbance in the contiguous structures.

It is too often stated that antrum disease must be of a suppurative nature in order to be serious or to cause disturbance in other parts either reflexly or by direct absorption and infection. A common coryza means that the antrum membranes are also involved, because the structure is continuous and communicates by means of the ostium maxillare. It is to this every-day affection that I would call your particular attention and to point out some of the methods by which we may be able to prevent results which would otherwise become serious, not only in the antrum but in the teeth.

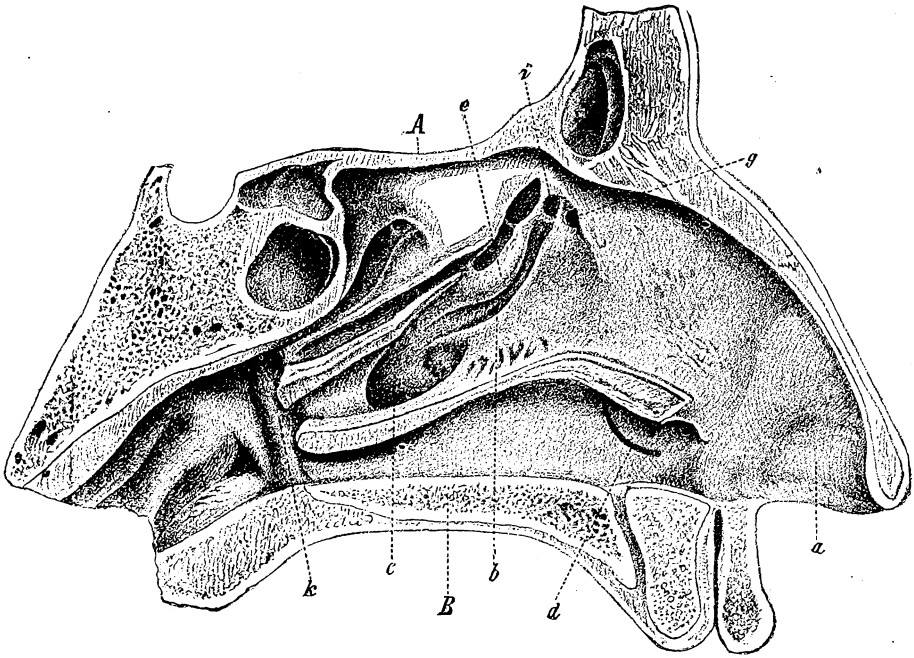
Coryza is a symptom and not a disease. The disease which causes the coryza is an infective inflammation of the mucous membranes of the head cavities, resulting in congestion, hyperæmia, stasis, hyperplasia and hypertrophy, and the final outcome of repeated attacks may be induration, addition of new material forming benign tumors, or by certain disturbances in their structures, forming tissues foreign to the natural cellular elements and organizing into malignant growths. So we see that the results of simple colds often repeated are not so trivial as to excuse our neglect, but should receive our careful attention. A patient often comes stating that he has taken cold "in his teeth" and applies for relief.



The above is a good illustration of a deflected septum pressing against the middle turbinated and the middle turbinated of the other side hypertrophied to fill the concavity.

You treat the tooth, which appears to present reasons for being disturbed. It is well to correct any variation from the normal, but do we always think of the possibility and the probability of the trouble in the parts above? Under these simple circumstances, trouble in the antrum is often set up by disturbing the tooth during the acute attack when it is not the cause. However meritorious or essential it may be to correct the difficulty, it is the part of broad conservatism to recognize the possible existence of other causes and to postpone our treatment of a condition which is not a cause, until the danger of disastrous results of the interference has passed. The point may seem far-fetched, and the argument will be brought forward that in the normal condition of anatomical

structures there is no communication between the tooth socket and the antrum. But if the histological structure of the alveolus at this point is studied it will be found to consist of very porous bone abundantly supplied with all the conditions which make capillary communication not only a possibility but a probability. "But the floor of the antrum is protected by mucous membrane." So much the more is it liable to the absorption of purulent material, on account of the absorbents being located in the sub-mucous layers and in the areolar tissue underlying all mucous membranes.



This illustration shows the relationship between the turbinated bodies and the antrum.

Abnormalities in Nasal Cavity.

With a view to the methods of treatment, I wish to speak of the abnormalities often found in the nasal cavity, the existence of which would direct our attention to the only rational treatment for cure. Let us follow the principle that it is never admissible to effect relief by indirect methods when we can use those which are direct. To illustrate: It would not be admissible to enter the antrum from below by means of extracting a molar tooth, when hypertrophy of the middle turbinated body is of such a magnitude and

nature as to block the ostium and cause pressure upon adjacent structures, thereby confining the products of inflammation, whatever they may be, within the cavity. As I have stated before, repeated colds are largely responsible for much damage to the antrum, when constitutional dyscrasias are of such a nature as to promote hyperplasia, followed by hypertrophy with all of its consequences. If it should become purulent, degenerated to an atrophic condition, or suppurative, or necrosed, we will certainly relieve the temporary difficulty by going in through the alveolus. But do we thus remove the possibility of the return of the difficulty in the future? By no means. The recurrence of an acute attack will cause fresh trouble, and we have done only what relatively we would accomplish in mitigating the sufferings of a headache by giving antipyrine. When the middle turbinated is in the condition stated, it is a foreign body and there is as much reason for its removal (that is, that part of it which may be an offence) as for the removal of a bean or other foreign body which may have been accidentally introduced. By this means we make drainage a possibility and irrigation of cavity of the antrum easy. It is a principle in surgery that we should always drain at the most dependent point. Sometimes there are good reasons why this should not be done, and we are dealing with one of the instances now where it may be safely done in another way. Upon the removal of the portion of the middle turbinated which is the means of blocking the ostium, the congestion in the mucous membrane of that canal and of the whole of the antrum will be relieved. Thorough irrigation can be effected and drainage made possible by making the ostium the lowest dependent part in the position of the head for that purpose. Lying on the side will make the ostium the lowest point. The slight inconvenience is better than the sacrifice of a tooth which might have been saved, as also the unnecessary surgery, which is the nightmare of the sufferer. The operation of removing the offending portion may be made painless and is much more necessary than removing the tooth and drilling through the alveolus, inserting a canula and tedious or prolonged treatment. We accomplish two things instead of one—curing the disease and preventing the atrophic shrinkage of the nasal membranes, which is almost sure to follow such interference with nasal circulation.

Above, I spoke of the different results of inflammation. These results are manifested in many different ways, some of which are as follows: Benign nasal myxomata, commonly called polyps, which not only often spring from the middle turbinated body, but from the interior of the antrum; fibroid degeneration of the mucous membrane; hyperplastic enlargement of the inferior turbinated body, blocking the inferior meatus of the nasal space and interfering with aeration of the antrum,

as well as damming up the secretions; thickening of the mucous membrane of the nasal septum, in turn causing hypertrophy of the turbinated bodies otherwise normal; spurs on the cartilaginous and bony parts of the septum, causing an excessive flow of acrid mucous, which gives rise to chronic catarrh, making infection of adjacent membranes probable; syphilitic disease of the ethmoidal and sphenoidal sinuses, a direct infective medium for trouble in the antrum; purulent ophthalmia, causing degeneration of the orbital cavity and sometimes necrosis of the orbital plate which so thinly divides that cavity from the antrum; and many others which are direct causes of antrum disease. It is not my purpose to discuss these, but only to point out the dangers arising from them, and to remind you that they should be considered in connection with any kind of disease of the maxillary sinus, no matter what the cause may be.

I wish to call attention to the often unnecessary operative work performed upon the antrum. Like all parts of the body, nature repairs better at times when it is not interfered with. All surgery and therapeutics are simply the means of assisting nature in her beneficent work. Further than this, the rule should be "hands off." The warning signals should be heeded, but before we strike the enemy watch the movements and observe the tactics. Circumvent with stringent measures when being worsted and do not wait until the breastworks are broken down before the artillery is brought into action.

The illustrations in this article are from "Diseases of the Nose and Throat," by Bosworth, and are kindly supplied by Messrs. Wm. Wood & Co.

Deflections of the Nasal Septum as a Factor in Dental Deformities.

By THOMAS C. EVANS, M.D.,
Lecturer on Ophthalmology, Otology and Laryngology in the Kentucky School of Medicine, etc., Louisville, Ky.

Read before the Kentucky State Dental Association, at Louisville, May, 1898.

Two years ago I had the honor of presenting to this society a paper on adenoid growths as factors in dental irregularities and deformities. Following up this subject, I wish today to call your attention to the part played by deflections of the nasal septum in the production of these deformities, together with a brief description of an operation for its correction.

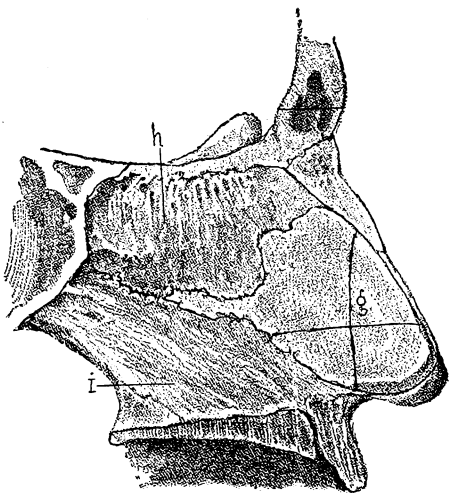


FIG. 1.

In order to make myself more clearly understood I wish to call your attention to drawing No. 1, showing the anatomical parts involved.

The nasal septum is formed by the perpendicular plate of the ethmoid, the vomer and the triangular cartilage. The perpendicular plate of the ethmoid descends from its cribriform plate, the posterior half of its free border articulates with the vomer. The vomer at an early period consists of two laminæ of bone enclosing between them a plate of cartilage. The prolongation of this plate of cartilage anteriorly forms the

cartilaginous septum of the adult; ossification of the vomer is not complete until after puberty. The vomer articulates with the perpendicular plate of the ethmoid, with the body of the sphenoid, with both superior maxillæ, two palate bones and with the triangular cartilage. The septal cartilage is triangular in form and is thicker at its margins than in the center.

Deflections of the septum are usually limited to its cartilaginous portion.

Now briefly as to the etiology. We may conclude that deflection of the septum is produced by a variety of causes, probably several causes acting or aiding each other in the same individual; that heredity and the intermarriage of different races and nationalities is often a predisposing cause; that among the local or exciting causes may be men-

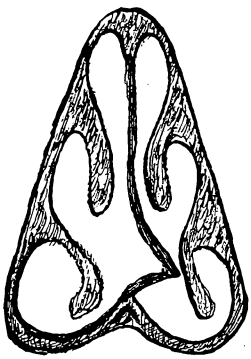


FIG. 2.

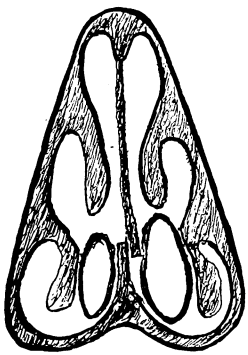


FIG. 3.

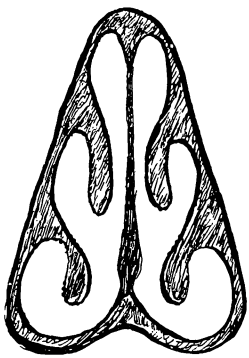


FIG. 4.

tioned trauma, nasal and post nasal obstruction, and malnutrition of one of the lamina of the vomer.

Deflections of the septum rarely occur before the seventh year. With deflections of the septum we find the high pitched and narrow palate. In proportion as the palatal processes of the superior maxilla are elevated, the normal contour of the arch is disturbed, its antero-posterior diameter is lengthened and its transverse diameter is shortened. The fact of the association of the high arched palate with deflection of nasal septum is admitted by all. But whether the deflection of the septum causes the high arch or is caused by it is a question not easy to determine. We know that the septum is destined to serve as a prop to push apart the superior maxillæ and hold their palatal processes in the horizontal position.

I think it most likely in some cases the deflection of the septum precedes and is responsible for the mal-shaped palate and arch. It seems

reasonable that cases of trauma occurring before or during second dentition might by bending or dislocating the septum destroy or disturb the support it gives to the palatal processes and allow them to approach the vertical position. This condition is greatly augmented by the fact that following the trauma there is more or less impediment to nasal respiration.

On the other hand, I can readily see how the palatal processes may be forced from their normal or horizontal position and by carrying the septum before them cause it to become warped or deflected. This condition we often see following in the wake of neglected adenoid

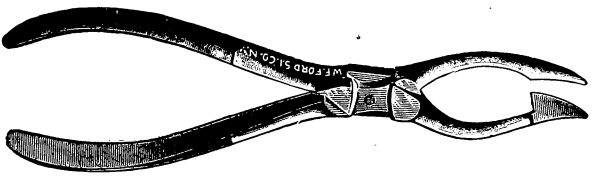


FIG. 5.

growths. From the little I know of dental literature I am inclined to believe that dental surgeons attach too little importance to the diseases of the upper air passages as regard their relation to production of dental deformities.

But whether you agree with me or not as to the part played by

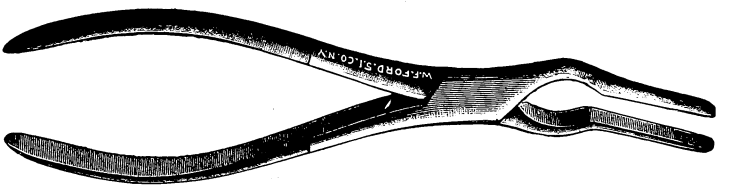


FIG. 6.

nasal obstructions in the production of dental irregularities, it is conceded by all that any disturbance of nasal respiration is a very serious complication when it comes to the correction of these deformities, consequently I wish to call your attention to the method of correcting the deflections.

As the diagnosis is apparent and its importance has long been recognized, the energies of the profession generally and the rhinologist in particular, have all been concentrated on the method of treatment or correction. It has afforded a rich field for the inventor of new instruments, and for the devisors of new surgical operations. Some of them were ingenious and plausible, many of them crude, cruel and irrational, but the erring and misguided member withstood the onslaught of them

all; after being punched, fractured, incised, distorted and twisted, the deflection would return to plague both the patient and surgeon until septal deflection became the *bete noir* of Rhinology.

Without attempting a history of many failures either in instruments or operations, I wish, as briefly as possible, to describe an operation that has given me the greatest satisfaction, and can, I believe, be safely and successfully performed in all cases of this deformity. The operation I will attempt to describe is substantially that devised by J. Morris Asch and described by him in a paper before the American Laryngological Association in 1890.

In order to save time and to make myself more fully understood, I wish to call attention to the drawings 1, 2, 3 and 4, and to the instruments 5, 6 and 7.

FIG. 7.

Fig. 1 shows the anatomical parts involved, the vomer, perpendicular plate of the ethmoid and the cartilaginous septum. The cartilaginous septum is divided by a crucial incision to be described later on. Fig. 2 shows the deformity with deflection to the left. Fig. 3 shows the condition at the completion of the operation after the insertion of the tubes. Fig. 4 shows the condition of the septum and nose two months after the operation. Fig. 5 represents Asch's septal scissors. Fig. 6, Adams' septal forceps, and Fig. 7, Asch's vulcanite perforated nasal tubes.

Operation for Deflected Nasal Septum.

In performing the operation a general anesthetic will be necessary, as the hemorrhage is quite profuse during the operation; the usual precaution in regard to the patient's position will have to be observed, as in all operations on the nose and throat, under general anesthesia. All the instruments necessary will be a pair of Adams' septal forceps as shown in Fig. 6, two vulcanite tubes as shown in Fig. 7, and a probe pointed septal knife.

When the patient is anesthetized, the surgeon passes his little finger into the stenosed nares and makes a thorough exploration as to the extent of the deflection, its point of greatest convexity, whether or not an enchondrosis exists and whether or not there are adhesions between the septum and the outer wall of the nose. If adhesions exist they should be dissected up before proceeding with the operation.

Having accurately determined the apex of the deflection, the Asch scissors are introduced into the nose with the non-cutting blade in the stenosed side. The first incision is made through the septum in the line of the greatest convexity and parallel with the floor of the nose. As the handle of the instrument closes, the cutting blade penetrates the septum with a snapping sound that clearly indicates when its work is completed. The direction of the scissors is now changed and a second incision made through the septum at right angles to the first, and intersecting it near its center. With the probe pointed knife the horizontal incision is extended both anteriorly and posteriorly to the limit of the cartilaginous septum. The vertical incision is extended in like manner. The completion of the crucial incision divides the cartilaginous septum into four imperfect, irregular and unequal triangles, as shown in Fig. 1. An Adams forceps is now introduced, one blade in either nostril, each of the triangular fragments of cartilage is caught separately and twisted on its base with sufficient force to loosen its articulation and completely destroy its resiliency. After the forceps are withdrawn, the finger should be introduced into the nose to find if resistance has been completely destroyed; if not, the forceps must be reapplied and the resisting fragment broken down. Want of thoroughness in this particular will defeat the object of the operation and result in failure. The septal cartilage is exceedingly tolerant of traumatism and no fear of overdoing the thing need be entertained. This part of the operation completed, the nasal cavities should be irrigated and clots removed from naso-pharynx. The perforated tubes can now be introduced. On the stenosed side the tube should be of sufficient size to hold the now flaccid and pliable septum in the position desired. On the other hand it should not be large enough to cause pain or unnecessary pressure. In introducing this tube, some care is necessary to prevent the tip of the tube passing through the crucial opening and into the opposite nares instead of directly back into the stenosed nares. I recently had this experience and found it a most annoying accident.

A small tube should be introduced into the open side of the nares in order to give support to the septum and maintain the overlapping fragments in closer apposition until healing takes place.

Properly fitted tubes will be worn without discomfort and are only noticeable on close inspection. With the introduction of the tubes the hemorrhage ceases. In from twelve to twenty-four hours the nasal cavities should be irrigated through the tubes with a hot boric acid solution. This should be repeated every two or three hours. The tubes should be removed on the third or fourth day and thoroughly cleansed. The nose

should be sprayed with a weak solution of cocaine and then cleansed with an alkaline solution, after which the tubes can be replaced.

After the first week the patient is able to remove, cleanse, and insert the tubes without the surgeon's assistance, and may safely be permitted to follow his ordinary vocation.

On the stenosed side the tube will have to be worn constantly for six weeks, when it can be removed during the day and worn at night for the next four or five weeks.

The small tube on the open side of the nose may be removed at the end of the second week after the operation.

While the septal scissors of Dr. Asch greatly facilitate the operation, it could be performed with a bistoury or septal knife. The dangers of the operation, aside from those due to the administration of the anesthetic, under the adverse conditions named are practically nil. The pain and discomfort following the operation are inconsiderable.

Since I have employed this method my results in cases have exceeded my most sanguine expectations. As the excess of the cartilaginous septum is all taken up by the overlapping and healing of the four fragments, a relapse or recurrence of the deflection is, I believe, an impossibility. If much enchondrosis exists on the convexity of the septum, it should be removed before the operation of straightening the septum is attempted. With this operation we can confidently promise our patient an upright septum with entire relief of the nasal obstruction and with a cessation of the long list of symptoms dependent thereon. In addition to this the external deformities of the nose will be greatly benefited if not entirely corrected.

Cocaine, Its Action and Therapeutics.

By F. L. DOLBEARE, M.D., Brooklyn.

Read before the Second District Dental Society, Brooklyn, March, 1898.

This is a subject timely in its discussion, for it is a drug largely used, and frequently, by the dental profession, and in its essential therapy, for local anæsthesia. There are a few drugs, and a number of combinations of drugs, found in the pharmacopœia, the result of observation and experiment by other than medical men, and coca is one of them. Travelers in the mountainous regions of Peru found that the natives of that country who carried the merchandise across the Andes were enabled to sustain heavy burdens with less fatigue and nourishment by chewing the leaves of a shrub indigenous to the country, the erythroxylon coca. The fresh

leaves, mixed with ashes or a little lime, and made into a bolus, was continually masticated. Various investigators and experimenters found that the mental and muscular powers were greatly stimulated, but no scientific observer has given any detailed account. Manufacturing chemists have made efforts to derive medicinal preparations that would produce similar effects, of the fresh leaves, but have not succeeded, so it is thought some volatile principle must escape or else be destroyed in the decomposition occurring in the process.

Writers have given contrary reports of their individual experiences with the drug, the early ones clothing their descriptions with fanciful portraitures of dreams and delirium. My observations have lead me to believe that all drug stimulants depend greatly on the idiosyncrasy of the person for the pleasurable sensations produced.

Natives of the Sunny South exhibit, under the stimulus of narcotics, the dreamy luxuriousness and pleasurable conditions which we would not look for in the stolid, fat-faced Esquimo, nor should expect in the hard-faced, practical Yankee. In confirmation of this, writers of authority themselves have been personally responsible in many instances for their own observations.

Five years' practical experience as a physician in a sanitarium for inebriates have brought certain conditions under my observation, and from these I purpose to deduct what may be of interest in this paper.

Over fifty years ago the active principle of coca was discovered, and Dr. Albert Niemann gave it the name of cocaine.

With preparations of alcohol, opium and lesser drugs, coca, with its principle and compounds, is classed as a stimulant; and for its stimulating effects, or its modifying action on other drugs, has its chief employment by those unfortunate individuals so aptly termed "narcomaniacs" by Dr. Norman Kerr.

Physiological Action of Cocaine.

We rarely see the effect of one drug habit, the inebriate having usually two or more associated. The opium fiend has acquired the habit of that drug in relieving the depression following his alcoholic excess, and then learns to take cocaine to relieve the overdose of opium. That he is right is shown by the physiological actions of these drugs, but where he is wrong is the excess of dosage. Natural stimulation produced in a healthy body by food and rest cannot be counterfeited by artificial means. Any attempt is followed by a corresponding depression, and the continued attempts to relieve depression by the repeated indulgence in stimulating drugs, with loss of moral responsibility as to its results, is my definition of an inebriate. In small and repeated doses, cocaine shows its stimulating action on the nervous and

muscular systems. One thinks faster and acts with less sense of fatigue, but at the same time with less co-ordination, in other words, hurriedly.

U. Mosso (Plügers Archives, 1890), in a lengthy and wearisome review of his investigations with the drug, has established some important facts. "It takes a 10 per cent. solution to produce paralysis of the motor and sensory fibres in a mixed nerve. Internally, does not paralyze terminal nerve fibres of sensory nerves, but diminishes general sensibility, due to its action on cells of spinal cord. Stimulation more marked in muscles that are fatigued, restoring them to normal capacity." The heart jumps from normal to 100-120 beats per minute, the respiration to 25, and the pulse a rise in pressure from the interference in respiration or by direct action. The temperature reaches 100-101 degrees, and increased frequency of urination and fecal movements are noted. To this is associated a decreased desire for food and sleep; the whole condition being one of artificial and continued stimulation. It is questioned whether the sexual appetite is affected.

Some writers deny any aphrodisiac properties to the drug. My observations show that while Venus may excite a fervor, the penile portion is so shrunken and shriveled that her devotees are incapable of worshipful acts. Howard Wells, surgeon U. S. N., in an article in the Ther. Gazette, Vol. VIII., No. 5, writes of examining the sexual organ in a male after the free use of cocaine for the treatment of nasal and pharyngeal catarrh, found the parts retracted and sometimes almost buried, and the scrotum drawn up.

Cocaine Anæsthesia.

In the local application of the drug, cocaine has a distinct and useful action, that of producing anæsthesia of the parts. Whether by injection or by direct application its action is more or less rapid and marked. On a mucous membrane there is a blanching and sense of numbness and a decrease of secretion. After that effect is lost there is an increased redness, showing there was a contracting of the capillaries, followed by a relaxation and subsequent engorgement.

As the loss of sensation was due to the action on the sensory nerve fibres, so nerves of special sense may be paralyzed.

Usually a sterilized 4 per cent. solution is used, the quantity to be determined by the nearness of the operation to the head. If precautions are taken to prevent the general circulation taking up large injections, and free hemorrhage established before the ligature is released, no apprehension need be felt.

Sallard (Medical and Surgical Review, Paris, March 15, 1896) gives grain iii of cocaine as a safe limit for hypodermic injection.

In the same number Dr. Hugenschmidt, dentist, reports a case in

which injections of cocaine having always produced untoward symptoms in a female, tried ten (10) minims of distilled water, and the patient had a severe attack of cyncope lasting over half an hour.

Dr. Schleich found that injections of distilled water produced anæsthesia, but were preceded by pain. He then experimented with saline solutions to find the strength that would be both anæsthetic and painless, and found that 2 per cent. solution answered the purpose.

A much better result could be obtained by adding cocaine, and he employed three solutions, using one part cocaine to 1,000, 5,000 and 10,000 parts of the 2 per cent. saline solution respectively. Of No. 1 he injected 200 minims, or one-fifth grain of cocaine, of the others one to two ounces. The first injection was rendered painless by ether spray, and the area to be anæsthetized was literally infiltrated by repeated injections. No danger was apprehended, as half the fluid would escape at first incision.

He gives a history of 500 operations unattended by any alarming symptoms.

Acute poisoning by cocaine is sometimes brief and fleeting. A condition of vertigo, followed by nausea and vomiting. A tingling and numbing of the extremities and excitation of the nervous system. A flushing of the face, soon followed by pallor. Dilatation of the pupils, profuse perspiration, slight convulsions. Condition followed by after effect of marked insomia.

In grave cases to these symptoms are added the convulsions, which are at first tonic, then clonic, the face being cyanotic, due to the asphyxiation. There is a rapid, almost imperceptible pulse, increased respiration and a rise in temperature. The patient dies of asphyxia, due to the paralysis of the respiratory center.

What can be done by way of treatment consists of laying the patient on the back, giving inhalations of ammonia and amyl nitrite, with injections of ether and caffeine.

The treatment of chronic cases, or "cocainism," should be the immediate withdrawal of the drug, and then such general treatment as the symptoms indicate.

The employment of the drug for other than anæsthetic purposes I greatly deplore. Its action is too fleeting to be of any constitutional benefit, and such preparations as wine of coca owe as much to the alcohol which they contain as to the coca.

In the local application to diseases of the naso-pharyngeal tract there is the danger of establishing the drug habit.

So it is wise in these cases, as with some other drugs, to avoid the patient obtaining any knowledge of what is being employed. Applied in

solution or used in combination with other drugs in a spray, there should be no difficulty of keeping the patient in ignorance.

"Home treatment," so readily advised by the doctor and practiced by the patient, needs but a knowledge of the ingredients to engender and keep up a condition little conceived by the thoughtless practitioner.

Points.

By DR. WM. H. STEELE, Forest City, Iowa.

Read before the Northern Iowa Dental Society, Mason City, September, 1897.

In casting about for a subject for this paper, I decided to rake over the rubbish heap of "has beens," and resurrect one of our lost arts.

Time was when every dentist had to be, to a great extent, his own instrument maker, and before the advent of the dental engine, when hand instruments were used exclusively, all broken or worn out instruments were carefully laid aside for a dull day job, when they would be worked over into new points, tempered and polished.

Of course some operators were more expert at this work than others, but almost every one who practiced dentistry could do the work, while today there is probably not one in five who knows how to work steel properly.

Instruments are now so cheap that it does not pay the busy practitioner to devote much of his valuable time to this work, but often a useful instrument is broken in an operation, or some special point is needed for a particular case, and it is very convenient to be able to do the work when necessary. Only the finest quality of steel should be used, and it must be manipulated in such a manner as to retain its good qualities until the instrument is finished. The best quality of English tool steel or Stubb's steel drill rods will prove satisfactory, if properly worked.

Forging

Great care should be taken not to overheat steel, as it destroys the grain and makes it brittle. Small instruments should never be heated to a degree that will raise scales while being worked. In drawing a point, all sides must be hammered alike, otherwise the point is liable to spring in tempering, as the side hammered most will have the finest grain.

When a point has once been forged flat, do not attempt to hammer it back to a round or square, as such manipulation will spoil the instrument. Steel should not be hammered after the color fades, until in the final heating, when it should be hammered to a dead black, and the last strokes should be on the cutting edge.

Rough Dressing, Tempering and Polishing.

After the instrument is forged to shape, as well as can be with the hammer, it should be dressed up with suitable files, then tempered. For fine tempering, I prefer night or a dark corner, in order to better watch the color. For drills, heat the point to a cherry red, and dip in mercury. For excavators and small chisels, make a shallow tray one-eighth inch deep, and fill with the following: One ounce of wax, one-half ounce of resin. Heat the point to a deep red and plunge into the composition. This method is preferable to tempering and drawing for small instruments, as it is more certain and requires less skill to produce uniform results.

For larger instruments, I prefer to temper and draw, using a bath made of sperm oil and tallow. Heat to a deep cherry red, dip the same as in a water bath, and draw to a pale straw color. If a chisel is desired very hard on the cutting edge, place that part of the instrument on a piece of cold steel, hold the shank in the flame, and draw to a straw color, allowing the color to run no farther than to the portion resting on the steel.

After the instruments are tempered, they can be finished on the lathe with an Arkansas stone and polished with crocus, using three grades—coarse, medium and fine. Use the first two grades on cotton buff wheels, and the last one on a chamois buff.

General Hints.

Broaches, explorers, and other small instruments, can be annealed very soft and even, by placing them in a piece of iron tubing; fill around with iron or brass filings, plug the ends of the tube, heat it gradually to a red heat, cover over with hot sand, and allow to cool over night.

To temper small springs, heat to a cherry red and dip into water, then place in a dish and cover with oil; hold the dish over the flame until the oil catches fire, then set away and allow them to cool in the oil.

In tempering in oil or water, always dip the instrument perpendicularly. If dipped on a slant, it is liable to cause the instrument to spring, especially if the bath is very cold. When tempering light work, the instrument must be handled quickly, for the edge where the best temper is required is the smallest part and cools first, often rendering the temper defective just where it should be most perfect.

It is a good idea to have an assortment of blank instruments made up, dressed to a fine taper, annealed soft and laid away for an emergency. When needed the point can be tempered, and the remainder of the instrument being soft, it can readily be bent to reach and fit any cavity desired. By this means a deal of hard work and valuable tooth substance can often be saved in excavating for filling.

President's Address.

By Dr. H. B. Tileston, Louisville, Ky.

Read before the Kentucky State Dental Association at Louisville, May, 1898.

I regret very much my inability to present to you today for your instruction any new or valuable methods that have been introduced by members of our profession since our last meeting. At the same time, while ever in search of means and methods that will enable us to step up one degree higher in this, one of the most charitable and humane of intellectual and technical professions, there are subjects that are of vital importance to us in the upbuilding of our chosen calling. First in importance in laying the foundation for professional life is the necessary training of the mental faculties, in fact, education.

There is no doubt in my mind that the student who enters the dental college with an A.B. or M.A. degree is better prepared to absorb and digest the theoretical teachings at least, of the dental schools of today. The profession is in a measure to blame for the laxity of examinations and requirements that have enabled any and all who have the money to pay fees to enter our colleges. I am glad to note here that the profession has at last awakened to the importance of this subject, and that awakening has borne good fruit as evinced by the fact that all of the reputable schools have increased their terms from two to three years, and I feel sure that before long four years will be required of students before they can obtain their degree.

Examinations will be given that will decide the candidate's fitness for matriculation, and rejections will occur more frequently in the future than in the past. Our colleges are gradually being brought to a higher plane of efficiency by the acquirement of improved appliances and the introduction of subjects that are new to a great many of those graduated a few years ago. Two subjects that are now included in the curriculum of our schools I know will prove of inestimable value to the student—technical and histological studies. It is our duty to our profession and

the public that we give to our colleges our hearty support and at the same time see that they on their part fulfill to the best of their ability the great responsibility that rests upon them.

This year we presented to our Legislature for enactment a new dental law, and by an overwhelming majority it was passed by the Senate and House of Representatives, but met its Waterloo later on. It is a shame and disgrace that this law was defeated by the flimsy excuses that caused its failure. I have carefully examined the dental laws of some of our States and find that they are more stringent in their requirements than the one presented to the Legislature for enactment by the reputable men of our profession in the State of Kentucky. We as a class do not ask for protection, but if it is necessary that we have laws let us have such that will bear equitably on all alike.

The Committee on Dental Law has labored faithfully and continuously in the preparation of the law as recently passed by the Legislature, they have lost much valuable time out of their practice, and the dentists of this State owe to them a debt of gratitude for the sacrifice of time and the unremitting work required of them in their efforts in behalf of this bill. We have now in full force in our State a medical law that is more drastic in its requirements and far-reaching in its effects than any dental laws passed in any of our States, and as an evidence of the fact, where are the numerous medical institutes that infested our city a few years ago? The men who operated these places were graduates of some of our best colleges. There was no appeal for them, consequently they silently folded their tents and stole away. The medical law has been fully tested in the highest court of our State and held to be constitutional by that eminent body. I do not wish to tire you with the length of my address, and with your kind indulgence for a few moments longer I am done.

It has been demonstrated to me very thoroughly in the last few years that one of the greatest aids in the upbuilding of our profession is society work. When I came to Louisville eight years ago, with a few exceptions, the members of the dental profession were the worst frozen up set of men I ever saw. How different today. We meet with a brotherly clasp of the hand and a cordial greeting; all of this has been accomplished by our societies. Our State society brings us together and establishes a friendly consideration for each other, and our local societies augment that feeling the more.

It ought to be the pride of the dentists of this great commonwealth to be, first, members of their State society and active members of some local society. I am glad to note that we have in the State several local societies, and if the members of our profession could but realize the great benefits they would receive it would not be long before each section of the State would have its representative local society.

More About the Maxillary Bones.

By Dr. Edward M. Kettig, Louisville, Ky.

Read before the Kentucky State Dental Association at Louisville, May, 1898.

Those of you who attended the last meeting of the Kentucky State Dental Association, and saw the views of the internal structures of the maxillary bones, as exhibited by myself with the lantern, should have a very fair idea of this part of facial anatomy, and what little I have to say on that subject here is only intended to lay more stress on two important conditions that play a part in our practice from time to time, and which I believe are not always fully understood by those attempting treatment of these parts.

One of these localities I have selected is the opening from the maxillary sinus into the middle meatus of the nose, together with its relation to other openings and secretion of fluids and discharges. The other locality is the hard palate, conditions of cleft palate, in which we hope to explain how this abnormal condition occurs.

The Antrum of Highmore.

As to the first proposition we will say that the antral cavity is so constructed that its opening into the nose is situated at its upper and inner wall, and is often found in the roof of the sinus. This fact flatly contradicts the teachings of leading text-books of anatomy, when they say that fluids from the antrum drain into the middle meatus of the nose, for our reason will tell us that if fluids or mucous should be found in the antrum more than enough to keep the surface moist, it would collect by reason of gravitation at the lowest part of the cavity, and in this way could only pass into the nose if the cavity should be filled to overflowing, and we would all be walking about with a water bag in the hollow of our cheek. Fluids, then, we will say, only pass from the one cavity to the other in pathologic conditions where the antrum is filled to engorgement. Now, while the antrum is constructed with a view toward preventing drainage, the other air cells about these parts are so arranged as to form complete drainage, and while in normal conditions I do not believe that more fluid is secreted in the frontal and ethmoidal cells than suffices to keep the parts moist and lubricated, still we have all felt that sense of fulness about the anterior base of the cranium near the root of the nose when the mucous surface lining the frontal sinus and infundibulum become inflamed and undoubtedly secrete more than enough mucous, and it is discharged through the canal from the frontal sinus or infundibulum

into the nose at the orifice of the maxillary sinus, in conditions ordinarily understood as "taking cold."

I do not believe that the mucous lining of the antrum takes on inflammatory action when congestion occurs, as in the case of taking cold, for it is the only cavity not provided with drainage, and would have no way of ridding itself of surplus fluids which the other air cells drain into the nose, and the nose through its natural outlets, anterior and posterior. While fluids from the antrum could pass into the nose in cases of engorgement, no fluids from the nose could get into the antrum for the reason that the muciform process acts as a guard in front of the maxillary opening. It forms by its shelf-like process on the side of the middle meatus, the hiatus semilunaris, and protects the antrum from anything getting in from the nose. The infundibulum ends in this semilunar groove, and in pathological conditions might pass from the groove into the sinus, but only from the frontal and ethmoidal cells and not from the nose itself. With this supplementary explanation, in connection with the lantern slides as shown last year, I hope we will all more intelligently understand the treatment of antral troubles and its relation to the frontal sinus, together with possible complications of that cavity.

Etiology of Cleft Palate.

Our second proposition was to explain how cleft palate occurred, and the changes found in the development of the maxillary bones under such conditions. We have all seen cases of cleft palate where such cleft deviated either to one side or the other with a usual tendency toward the left, and where one or more teeth were either found wanting or misplaced, without knowing just how the deformity was produced, for our text-books do not teach us these points, giving us no idea at all as to the developmental period of the palatal processes of the superior maxillary bones.

I have endeavored by means of the drawings to show the points of ossification in the palatine processes at times of development, but why a deviation from the normal during any period of gestation should occur causing cleft palate, will always remain a matter of speculation and conjecture. The development of the superior maxillary bone commences so early and increases so rapidly, that it is difficult to mark out its line of growth. It arises in membrane from four points of ossification. These are the orbital, nasal, alveolar and palatine. These appear about the sixth or seventh week of embrional life and soon coalesce. Hence these parts are claimed by some to arise by one center. They form the lateral portion of the bone which contains all the teeth except th incisors, and is called by comparative anatomists the true maxilla. That portion of the bone which contains the lateral and central incisor teeth arises from a separate

point of ossification, and is known as the intermaxillary or premaxillary. In many of the lower animals it remains distinct from the true maxilla throughout life. Where there is union between the two intermaxillary bones in the median line, but no lateral union between them and the true maxilla, they form the intermaxillary bones of lower animals. In man the intermaxillary bone soon unites with the maxilla proper by a suture which may be seen on the hard palate until about adult life. This suture extends back to the anterior palatine foramen.

In single or unilateral complete cleft palate extending from the facial surface to posterior portion of palatine process, the premaxillary does not unite with parts containing other teeth, neither does the true maxilla and palatine processes of the palate bones unite.

In double cleft palate, the incisorial divisions may have united in the median line (forming a true intermaxilla), but not laterally with the true maxilla. In some of these cases the vomer can be seen protruding in the median line between the two halves of the hard palate.

We might say that fissure of the hard palate always follows an intermaxillary suture, of which there are five: One on the median line, one between each lateral and cuspid, and two additional between centrals and laterals. In early life there are four distinct portions of the intermaxillary bones, each portion carrying the germ of an incisor tooth. These parts all subsequently join the true maxilla by continuity of tissue, except upon the median line, where the two halves unite by suture. With this in mind, it is not difficult to account for the missing teeth in cleft palate cases.

The origin or causation of hare-lip and cleft palate are to be looked for among the prenatal influences, and are generally conceded to be faults in the developmental process. These influences to be operative must occur prior to the tenth week after conception. The formation of the maxilla begins at a very early period of intra-uterine life, and the extent of the fissure will depend very largely, if not entirely, upon the time at which the arrestation of development occurred; the earlier the period the more extensive the cleft, and vice versa. The fundamental influences, however, which underlie the causation of these defects in development have not yet been reached, but theory alone is our only guide in the matter. Faulty nutrition and heredity no doubt play an important part in these defects, but a condition known as "maternal impressions" is probably responsible for the greater majority of cleft palate cases. It is interesting to note in this connection that most women who are so unfortunate as to give birth to deformed children, especially those with deformities of the face and mouth, feel very confident that it is the result of "maternal impressions" induced by fright, the sight or knowledge of a like deformity, etc.

How much, if any, there may be of scientific truth in this popular notion I am not prepared to say, more than that in all popular notions there is generally somewhere hidden away a kernel of truth. When we know more about the influences which the nervous system exerts over cell life, the effects of the physical and mental conditions of the parents during the time of conception, and of the female parent during gestation, we shall be better able to consider the question from a scientific standpoint; till then it would be mere speculation.

Welding Properties of Gold and Its Manipulation.

By W. E. GRANT, D.D.S., Louisville, Ky.

Read before the Kentucky State Dental Association at Louisville, May, 1898.

The proper selection of a filling material is at times a difficult matter, yet frequently the qualities of the material to be used are not considered with regard to the position of the tooth and the extent of decay. It is not an uncommon thing to have the patient tell the practitioner what material he wants and we hear operators excusing themselves for certain operations and blaming the patient. Let us try to improve this condition of affairs.

Gold has satisfied the requirements more thoroughly than any material or combination of materials for more than a century, and while it has its objections, such as its conductivity of thermal change and inharmonious color, yet the high position which it holds, as a stopping for carious teeth, makes it an eminently proper subject for discussion at a dental meeting. We appreciate the fact that purity is the prime necessity, and while manufacturers lay much stress upon the purity of their product, few of them reach above 999-1,000ths, and many fall below.

The terms soft and hard foils are misleading since all golds which proximate purity are very soft under the instrument. The difference between the two kinds of gold is the inability to make a certain foil cohesive under a limited degree of heat and to render another cohesive under the same degree of heat. So, from a manufacturer's standpoint the condition is somewhat different from the acceptance of the terms in practice. Nearly all non-cohesive foil offered for sale can be rendered perfectly cohesive by the application of heat.

It has been claimed by some operators, and especially some of our Eastern brothers, that non-cohesive gold has no place in dentistry. I

deny this and say that teeth having good cavity walls can be better filled in much less time by non-cohesive foil; that it is not hardness, but conformity and adaptation that produces the saving qualities.

Proper Care of Cohesive Gold Foil.

In bringing together two portions of freshly annealed foil and applying pressure they form a union practically inseparable. It is to this property that we apply the term cohesive. Gold which has recently been made and excluded from the atmosphere may contain sufficient cohesive properties to weld satisfactorily, but this property is soon lost and it becomes necessary to anneal it if union between the layers is desired. Dr. Black has demonstrated the fact that if gold be subjected to fumes of numerous different gases its cohesive property is quickly destroyed, but that this can be completely restored by heat, except in case of sulphur or phosphorus fumes. The necessity of excluding gold from the atmosphere, and especially where gases from combustion of coal are likely to be present in the operating room is apparent. The extreme difficulty in doing this has brought the practical suggestion from Dr. Black that all foils be subjected to the influence of carbonate of ammonia by keeping them in a drawer with a bottle of that salt. The ammonia gas has the power to prevent the deleterious influence of other gases. Since by working gold which has been exposed to these gases, nothing but mechanical union is obtained, the operation should be made with that in view. Here, then, comes the consideration of annealing, which is necessary if one desires strictly cohesive foil.

Many ways of annealing may be resorted to, but care must be taken so that additional impurities are not added. Phosphorus dropped into a wick from the burning match, or imperfect combustion of gas, might give phosphorus or sulphur deposits. Gold can best be annealed by placing on a tray of mica or platinum and holding over a flame or by the use of an electric annealing tray. The greatest cohesive property is obtained a little short of redness. The working properties of the various reliable foils makes but little difference to the cautious operator. Of course their manipulation depends somewhat on their manufacture. The crystal golds absorb more impurities and require special care in keeping and annealing. In the use of this form of gold, the tendency is to use pieces that are too large, because being spongy in character, the gold appears to become more thoroughly condensed in manipulation than is really the case. The mistake is also made in increasing the size of the pieces of gold after the extension of the filling beyond the cavity walls and also in increasing the size of the instrument to be used. The tooth, by its physiological construction, is only able to receive a certain blow without injury, hence the condensation of the material is decreased as the size of the instrument is increased.

Professional Quackery.

By Dr. G. H. Green, Danville, Ky.

Read before the Kentucky State Dental Association at Louisville, May, 1898.

Whether quackery in the dental profession is on the increase or not is a question that I am not prepared to answer. But that it is much more extensively practiced than is generally suspected, there is no doubt.

With our present laws regulating the practice of dentistry, the numerous colleges for the thorough education of men in the dental art, and our many societies, associations and journals, quackery in our profession ought to be an obnoxious practice of an obnoxious past.

Knowing human nature as we do, we must realize that, so long as the laws remain as they now are, there will be a great many unprofessional dentists who will continue to practice unprofessional methods, and we will have them and their methods constantly to fight. But they are an open enemy, sailing under their own colors, which are readily recognized wherever they may be met. But what a great menace to the dignity of our profession, and to the prosperity of our honorable practitioners are those who, bearing the false flag of professionalism, are daily practicing methods antagonistic to the dignity and honor of the profession which they are supposed to represent.

Quackery Defined.

Now, let us consider for a little what quackery is. Ordinarily we consider a quack to be a man who pretends to know and practice a profession of which he is ignorant. But probably the best and simplest definition we could find is, "One who practices a profession in an unprofessional manner."

No doubt, the most conspicuous characteristic of a quack is his tendency to advertise in the papers. He may be a man who boasts of his skill before his patients and the public; a man who falsifies; who makes misstatements and attempts to deceive concerning his professional operations and attainments; a man who ignorantly uses drugs and nostrums, the composition or physiological effects of which he does not know or understand—and of whose antidotes and treatment in case of toxic administration he is ignorant; a man who belittles his worthy practitioner in the hope of magnifying his own importance in the eyes of his own, or of their patients; one who cuts fees to secure practice or allows himself to be jewed down from his regular fees. All these go to make up the quack.

A thoroughly unscrupulous country practitioner, a graduate of a reputable dental college, came into my office one day to show me a set of very cheap teeth he had just purchased. He said it was very foolish to buy high-grade or expensive goods, as the patient can never tell the difference. Then he went on to say that, in dentistry, one has to do a great deal of "shinnanigin," as he called it. "Now," he said, "if a patient comes into my office to have a plate made and asks what it will cost, I show her a set of 90-cent teeth and tell her that this is the best set of teeth I can buy, that I use the best of materials throughout and that I will guarantee the plate to be all right, and price it to her at $12. Then I show her another set of 90-cent teeth and tell her it is a good set, but not the best, and price it at $9. Lastly, I show her still another 90-cent set and say that this is not much of a set. They may do and then they may not. I don't promise anything, but if she wants a cheap plate I will make her this for $6.

"You see," he goes on, "there is the same material in each case, yet nine times out of ten she will take the $12 set."

I know there is not a man present who would not condemn such practice as utterly reprehensible, and you will all agree that this practice is unquestionably quackish; still, how many men, standing high in their profession, are doing the same thing in a slightly different manner?

Suppose a dentist, whose fee for constructing a rubber plate is $15, using, for instance, Justi's plain teeth, $1.68, the best pink and red rubber, his whole expense is a little over $2. He values his services in this work at a little less than $13. Now he might do it for less, as a matter of charity or courtesy, at the same time informing the patient that he has discounted his regular fee, and why, but he would not let a well-to-do person jew him down one cent for any consideration. He values his professional services at so much and he will have it; yet, how often do you see this same independent man lay in a goodly stock of $1 teeth, and when a patient, after asking his fee for making a plate, objects to what she considers an exorbitant charge, saying that she wishes a cheaper article, will say to her: "Well, madam, I can't afford to make a plate of the best materials for less than the sum quoted, but if you are willing to take a somewhat inferior article I will make you a plate for $10." His actual expense has been diminished just 68 cents, and he has charged for his services in exactly the same work, something over $8. He has, without letting her know it, allowed her to jew him out of about $4.50, and has made her retain her respect for him, professionally, by resorting to falsehood, implied. Why? For fear of losing a patient, to secure the fee, or to injure a competitor.

Advertising is conceded by all to be an unprofessional proceeding,

and is by far the commonest form of quackery. A firm that advertises in the papers, stating their scale of fees, boasting of elegant workmanship, "underbidding all others," "free extraction," "vitalized air," etc., is universally known to be a quack concern.

A man who places his picture in the paper, advertising painless dentistry, painless extracting, guaranteeing all his work to be perfect, and claiming to be the discoverer of some grand remedy or process, is branded a quack the world over.

Unprofessional Methods.

I know it is a mooted question, whether or not the inserting of a simple card in a daily or county paper is altogether a professional practice. Extremists condemn it, but I believe it is not considered bad practice by the majority of our representative professional men, yet a great many dentists who would feel insulted at the merest suggestion that they were practicing unprofessional methods, will make their card in the paper conspicuous by a grinning set of teeth, an enormous molar, a piece of bridge work, or something equally disgusting. Or, maybe, a conspicuous card reading something like this: "Dr. James P. Merriweather, Dentist. Office cor. Third and High Sts. Dentistry practiced in all the latest methods. Crown and bridge work a specialty. Teeth extracted positively without pain." Such men are constantly recommended to the State Associations for membership, by dentists in good standing, and elected members. So great is the demand for those disgusting cuts that some of our leading journals advertise the blocks for sale.

Several years ago an ignorant country practitioner of my acquaintance gave me a formula which he had purchased for $10 from an itinerant dentist, the chief ingredient of which was cocaine. He also had what he called an "antidoted" preparation, the same thing exactly, except for the addition of a little nitro-glycerine. He found that the former obtunded quite as well as the latter and was less expensive, so he used it ad libitum, at one sitting obtunding and removing as many teeth as the patient wished. I reminded him that he was using a dangerous drug in a very reckless manner, but he laughed and said he was not afraid. He didn't know its danger and had no idea what to do in case of a toxic administration. This man is not nearly so deserving of censure as the so-called reputable practitioner who uses secret nostrums, or remedies, the ingredients of which are given, but not the proportions, for he would be quite as helpless in case of poisoning as my ignorant country friend, but would be altogether lacking in his excuse, the plea of ignorance.

Here, again, some of our best journals are responsible for this wholesale malpractice, for they recommend in their advertising pages what their editorials positively condemn.

Whether the responsibility for a great part of this extensive practice of unprofessional methods rests with us, whether it is that the colleges that turn out our young men have no place for dental ethics in their otherwise thorough curriculum, or whether the inconsistency of our journals is to blame, is a question not easy to answer. Probably there is more or less fault in all.

But, gentlemen, the question with us is, shall our profession be represented by professional men, or shall it be represented by quacks?

A New Combination for Filling Root Canals and Method of Manipulation.

By Dr. W. L. Roberts, Springfield, Mass.

Read before the Kentucky State Dental Association at Louisville, May, 1898.

By request of your committee, I gave you this a. m. a clinic on a method of filling root canals with a preparation that is both old and new. Old, because some of its ingredients have been used for a similar purpose before; new, because there has been added a new vehicle which, to the best of my knowledge, has never been used in dentistry in this way, and the preparation put together in a form that makes it easy to manipulate.

If I can convince you that this preparation will run down around the crooks and turns of small tortuous canals, and properly stop them up, I shall feel well paid for my effort.

An ideal root canal filling should be non-irritating and one that can be inserted easily, perfectly and to the apex. Also a very valuable quality is ease of removal, in case of subsequent pain or inflammation requiring it.

Some operators and writers claim that the use of antiseptic root filling is not necessary, as the antiseptic properties of the material soon pass away, leaving the root in no better condition than though it had not been inserted. I cannot fully agree with this idea. I am of the opinion that the root filling should be thoroughly antiseptic and remain so, at least until that portion around the apex of root where the pulp has been torn or dissected away, becomes thoroughly healed and returns to its normal condition.

One of the greatest difficulties has been how to be sure we have the apex filled in small tortuous root canals. For just this class of roots, I

am fully convinced that the preparation I offer you to-day, will be found eminently satisfactory, and for the benefit of those who are not familiar with the ingredients of this preparation, I will give you a brief description. It is made up of salol, balsamo-del-desarto and powdered resin.

Salol

Salol is obtained by the combination of salicylic acid and phenol; is a white crystalline powder, insoluble in water; without odor, and tasteless. It is antiseptic, germicidal and antipyretic, consequently is used externally for dressing of many wounds.

Balsamo-del-Desarto

Balsamo-del-desarto is an exudation from one of the varieties of pine or fir. Its virtues were first discovered by Dr. W. H. White, of Silver City, N. M. Experiments have proven that the resin has a pronounced antiseptic action. It will adhere to wet surfaces and is perfectly non-irritating to soft tissues with which it may be brought in contact, and is insoluble by the fluids of the mouth. Resin, plain resin of the shop, in a pulverized form, is used as a vehicle.

Method of Preparing the Root Filling.

The salol in any quantity (and which by the way I would advise you to procure at the apothecary store, where for fifteen cents you will get enough to last a lifetime), is to be placed in an iron pot, and double quantity in bulk of the balsamo-del-desarto is added, and the two slowly melted over a flame, and mixed; then, while warm, turn the mass out upon a slab or plate and knead in the resin with a stiff spatula, until when cool it forms a crystalline mass that will break with a snap. You will find it quite a knack to get just the right consistency so it will not be sticky and hard to work, but when once prepared a small jar full will last a long time.

I wish now to call attention to the fact that several years ago when salol was first placed upon the market, and was recommended so highly and used so extensively, especially in the East, for root canal fillings, it proved a snare and a delusion. At that time we would melt up a sufficient quantity and force it into canals with a syringe. It filled the canals all right, and as long as it remained there it kept the teeth all healthy, but the day of "reckoning" came, and we found those beautifully filled canals empty in about one year.

Then came balsamo-del-desarto. All who have used this are unanimous in saying that it makes a perfect root canal filling, but on account of its being so sticky, making it very hard and unpleasant to use, the majority of operators gave it up after a few trials, and back we went to the old process of chloro-percha and gutta percha canal points. After considering the matter for some time and making numerous tests,

including which were a combination of the salol and balsamo-del-desarto in paraffin, wax and several other vehicles, at the suggestion of an assistant in my office, we mixed up a batch using resin as a vehicle. This is the ideal. It is insoluble in the secretions, is brittle and is clean.

The next question is, what have been the success and failures? I have used it almost exclusively for about two years and during this time about six hundred root canals have been filled with it in my office. Several of my professional friends are using it, and, up to date, no failures are known to me. I will also add that it is being used by some of the leading dentists in this city, and while they have only had about four months' experience with it they report no failures. And, gentlemen, how can there be any failures if canals are put in proper antiseptic condition?

Method of Filling Canals.

The method employed for its introduction into root canals, I will briefly state. Rubber dam applied and canals properly prepared. You will observe that I have here an ordinary Evans canal dryer. I remove the point which comes with it and substitute therefor a copper point. These points I file down from wire, making them of several sizes, so that I may be able to go into any size canal. I have them no larger than a hair. I prefer copper, because it is easy to work, very pliable and fairly tough. It will safely enter crooks and turns of almost any canal and not break. It is also a good conductor of heat. A small quantity of the preparation is now removed from the jar, rolled with the fingers into a cone, and with the pliers carried to mouth of root canal. The copper point being heated, the preparation is very easily pumped up or down, as the case may be, into any canal that the smallest copper point may enter. Occasionally some buccal canals in molars are so minute that the smallest point will not enter. In these cases I heat them as warm as possible with hot blast and then force the preparation up with a very strong blast from a foot bellows or condensed air appliance.

In some cases where we have a large canal it is well to introduce a gutta percha canal point into the preparation while yet soft, although this is not necessary. In a very few moments the preparation will crystallize, especially if a cold blast is thrown upon it, and any filling material may safely be inserted over it, although where a gold plug is to be inserted I think it well, and in fact recommend a layer of cement over the canal filling.

I present these ideas and the formula with my compliments, and, if you will pardon me, I desire at this time to thank the Kentucky State Dental Society, The Falls City and Odontological Clubs, for the very friendly and cordial spirit and manner that they have shown me since I

have been within your walls, and think I can safely say that if the same friendly spirit existed all over the United States among the legitimate dentists, all would be happier and the profession elevated, not only in the minds of the profession but the people, and we would be able to do much more good.

The Dentist and Advertising.

By J. W. JUETT, D.D.S., Eminence, Ky.

Read before the Kentucky State Dental Association at Louisville, May, 1898.

"In these piping times of peace prepare for war," is an old but a trite saying, and one that was never better illustrated than in our present encounter with Spain. It is not my intention, however, to give you a discourse on the war with Spain, but to give you a few ideas that may govern us in our fight against the quack and quackery.

I agree with Doctor Bell, of Aurora, Ill., that the temptation to advertise is very great to the young man who is just starting in the profession, and finds the patients few and the expenses great. The fault, too, is not entirely with the young man, but often is a result of his training.

Duty of the Colleges to Teach Ethics.

It is not my intention to score our dental colleges that have done and are doing so much for the profession. Let each bear his part of the blame.

In the first place, whom do we admit to our schools? Any young man with the fee in his pocket (brains not considered), can be admitted to a dental college; it makes no difference about his former avocation. In fact, some of our schools admit young men who are already identified with advertising offices. These same young men go straight from our schools with their diplomas for what purpose? None other than to use them for advertising.

"We employ none but graduates from first-class colleges," is an old cry with the quack.

"The history of the world's progress is the history of men of genius, whose work has been made the subject of sneers of friends and enemies alike; who have lived and worked in solitude because they knew that truth was on their side and would win, and those lonely hours were the hours in which great pictures were painted—sonnets composed—poems written and the greatest triumphs of science achieved. Meanwhile the individual has been developed and is ready for all future work. His work, if he is a capable man, is the best advertisement any dentist can have, making and retaining friends for him when nothing else will."

Has the college that takes a man's fee, professing to fit him for his life's work, honestly done so when it graduates him? We think not. The young man should be taught the ethics of his profession; he should be lectured on the theory of building up a business upon legitimate lines, so that the dignity of the profession may not suffer at the hands of the students.

The standard of the colleges is not yet high enough. Some time in the great future a college may arise that will have the courage not to admit students on any other conditions than that they live up to a high code of ethics established by their "alma mater."

Not long since in reading the evening paper, I saw this:

"Cheap Dentistry."

"The ———— college of dentistry clinic, is attended daily by scores of the city's poorer classes seeking dental services. In order to secure some special cases for the advanced students, gold fillings will be made at one-half the usual charge, and all other fillings ten cents apiece for the balance of the month of April, beginning to-morrow. All operations under direct supervision of skillful teachers. Clinic daily from 1 to 5 o'clock at the college building."

What, the college advertising for patients? Yes, and naming prices, too. I did not notice that examinations were free, but suppose they were. If we would correct this evil, let us begin at the beginning; cleanse the sources of the streams and the waters will be sweet.

But what about the troubles that already exist?

Difficulties of Obtaining State Laws.

In our recent fight in this State, we learned by experience the cost of dental legislation. You that were not near enough to be with us can hardly conceive what it was, and how our Legislators (supposed to be the representative men of the country) were so easily influenced against good legislation, our Governor, as you all well know, contracting the same disease. Very few of them knew the nature of the bill; in fact, about four-fifths of them did not know that there was already a law regulating the practice of dentistry in this State.

I talked to a number of the members. One man said to me: "Doctor, I am opposed to your bill." "Why?" "Well, on general principles." "What are they?" said I. "Well, I am opposed to all combines and trusts, and you fellows are fixing a scheme whereby you can charge us poor devils anything you like and we will be compelled to pay it." I laughed; so would you. Could you conceive of anything more grossly ignorant? Said I, "Man, have you read the bill?" "Well, no, I haven't,

but So-and-so and myself have agreed to vote against the bill on general principles."

Poor old "general." I fear he was ridden quite hard during our last legislative session.

I fear we are slack in our duty in regard to this. We should make ourselves felt in the community in which we live. Let the people know that we are not mere "tooth carpenters," as some persist in calling us, but men, alive to right and good principles. Men who have chosen the profession in which we work for the love of it and not for the dollars and cents there are in it. Then we can explain what we want to our Representatives and Senators and we will get it.

We expect to begin the fight again in the near future and continue until success crowns our efforts. We know no such word as failure.

How many of you are with us? How many of you will see that the Representative and Senator from your district will give us their support? We need your help. Shall it be a fight against quackery to the death, or shall we go down in ignominious defeat?

Major and Minor Dentists.

By F. T. GARDNER, D.D.S., Louisville, Ky.

Read before the Kentucky State Dental Association at Louisville, May, 1898.

While the dental profession today is in a higher state of elevation than it has been previous to this time, still I feel it necessary to call the attention of its members to the existing relationship of the major and minor dentist.

The first thing of interest that presents itself is this question: Whether or not it is of value to the major dentist to have a friendly connection with us younger members of the profession? My answer is, yes, for on the younger men depends the future profession, and for this reason the elder dentists of today should take more interest in the younger men, and aid them to become worthy of filling your places and building up the profession, instead of letting them work away for the almighty dollar and make of themselves the ever despicable quack. Of all the undesirable things to the dental profession, you know a quack is the greatest.

But let us not blame them in every case for their condition, but in some instances partly throw the blame on the ethical dentist for not encouraging them. For instance, take a man who has graduated from

college and begins practicing legitimately, but finds it rather hard to build up a practice, and, perhaps, is financially embarrassed already. What is he to do?

It is likely that he has a desire to make a living, as most men have, so he tries his hand at advertising (the Chinese form at first, perhaps), and of course in time this all reaches the legitimate practitioner, and just at this time, when he is in a most critical circumstance, he thinks of the time and money spent at college in acquiring the necessary knowledge and skill with which to perform the duties of his chosen profession, and thinks of it with pride, for it is a thing he may well be proud of. But still that is not making him a living, so he forgets his honor and takes up the method just described, that of seeking the almighty dollar, and, I might say, a thing sought for too much by us all, for,

"Ill fares the land to hastening ills a prey,
Where wealth accumulates and men decay."

Now, I believe, if the older dentists would visit the men of this description and talk to them in a friendly manner, and show them their mistakes, also encourage them to remain honorable dentists, and by actions show that they take an interest in them, and are desirous of seeing them make men of themselves, worthy of note, I say, I believe that nine-tenths of such men would become worthier members of the profession, for many of them believe they are being held under the thumb of their superiors.

There are few of us, who do not at times need a helping hand, and no one is more willing to give or receive such, as the case may be, than your humble servant.

I do not wish to complain of the major dentist, but would call attention to the fact that the minor dentists perhaps need care and instruction more than is realized, for it is not until a young man graduates from college, that he knows how little he knows.

Central Dental Association of Northern New Jersey.

A regular meeting of the Association was held on Monday evening, May 16, 1898, in the parlors of Mr. S. Davis, 943 Broad street, Newark, after the usual Association dinner.

Prof. Dwight Hubbard, Dean of the New York Dental School, read a paper entitled "Contributary Causes of Antrum Disease" (published in this issue), and the following discussion ensued:

Dr. John I. Hart. There is one point that I think the doctor might make clearer to us; that is in the line of general treatment when we do enter an antrum through the socket of a tooth after its extraction. He said he would make use of medicaments of a non-irritating character; and I agree fully in his expression of views as to doing as little treatment as possible, recognizing the fact that excessive treatment is very apt to continue the irritation; but I think if he would suggest some medicament, and the percentages, he would still further clear the subject in our minds.

Dr. Chas. Meeker. A suggestion that seems to me of value in these cases is that of aeration of the antrum. That I have never thought of before, and I am extremely obliged to Dr. Hubbard for calling our attention to it.

Dr. Joseph Head. I hardly think it of necessity follows that where the antrum is involved through an abscess the extraction of a tooth necessarily follows. Dr. Peirce and others, of whom I am one, are in the habit, when an opening into the antrum is necessary, of making that between the roots of those teeth, an opening the size of a crow quill, and

that is quite ample for washing out and getting all the drainage necessary. Of course, where we have the opening in the canine fossa the drainage is not so good, but it usually serves.

Dr. B. F. Luckey. There is no doubt of the intimate relation of some of the teeth in the superior maxilla with the antrum of Highmore. Frequently the first molar and the second bicuspid, occasionally the first bicuspid, and semi-occasionally the cuspid, may penetrate the floor of this cavity. It is known to every gentleman present that the antrum of Highmore has been held up as a bugaboo to the dental profession from the time he began to study, and it is equally well known that we have little or nothing to do with the antrum of Highmore in practice. It is rarely, very rarely, that we are called upon to explore that cavity or to treat it at all. In case the root of a tooth projects into the antrum and trouble ensues through the death of the pulp or any other cause, usually the extraction or proper treatment of the tooth, restores the antrum to its normal condition, unless necrosis be present. I do not believe the doctor is exactly correct in the stand that he takes in relation to the troubles that may ensue in the teeth from coryza or any other irritation of the mucous lining of the antrum, at least in the case of live teeth. I can readily see how a cold or other irritation of the membrane might bring about unfavorable symptoms in cases of devitalized teeth and degenerate tissue, but where the teeth are in a healthy condition, where the pericemental membrane is normal, I think the theory is untenable.

Dr. R. M. Sanger. There are facts stated in the paper that seem novel. That which struck me forcibly is the statement that dental disturbance may arise from irritation of the nasal mucous membrane. During the epidemics of the grippe that passed through this country a few years ago every dentist, I think, was puzzled and baffled by the numerous visits paid to his office by people who were just recovering from the grippe and grippe colds, colds which were peculiar and marked because of the excessive coryza and general inflammation of the mucous membrane. The patients came in very frequently complaining of acute pain in the teeth, the teeth appearing to be in a normal condition. In my own practice I was quickly taught to recognize a trouble which I called "grippe toothache." That was a superficial diagnosis; and I believe that Dr. Hubbard tonight has solved what to me has always been a mystery—why patients had this "grippe toothache," and why, after a little while and without treatment, that trouble in the teeth entirely disappeared. That is a theory; whether it is true or not, it seems a reasonable solution of the question.

Dr. Carleton Brown. I can hardly agree with Dr. Luckey in what he says in regard to our never having toothaches that we cannot account for; and I do agree with Dr. Sanger in regard to the puzzling condition that he designated "grippe toothache." His suggestion that it might have been due to the condition so well described by Dr. Hubbard is certainly worthy of thought. If we can remember whether those grippe toothaches were all in the superior maxilla, although perhaps the condition might have extended, by reflex action, to the inferior maxilla, it certainly would be very interesting.

Dr. Hubbard. In regard to the question asked by Dr. Hart, I would rather not deal with that, because it is a subject that I would like to go into quite thoroughly if at all. As far as the general principles of treatment are concerned, I am, unfortunately, and not by choice, a special practitioner of medicine. What has this to do with the antrum of Highmore? Having practiced general medicine before adopting a specialty, I recognize this fact, that any inflammation in any mucous membrane, in any part of the human body, and particularly in the head cavities, is susceptible to constitutional treatment, and is relieved by this means sooner and better than by any local treatment. That is the first principle. Secondly, the principles of treatment of the antrum of Highmore, where there is inflammation without suppuration, is that of thorough cleansing and a simple, mild, antiseptic treatment. That is about all there is to it. I do not believe, as a general rule, in special applications, nor in special medicines introduced locally into the antrum of Highmore. I think the less we introduce into the antrum of Highmore the better. These two principles; general relief by establishing good drainage, and a good circulatory system through the blood vessels, to relieve congestion, do more to relieve inflammation of the antrum than all other treatment; then follow that with good cleansing and antiseptic treatment, not always irrigating by injecting fluids, but in other ways, as, for instance, by means of a spray projected over the capillary structures, containing some medicinal preparation.

With the statement of Dr. Luckey, "that this is a rare condition which dentists do not see very often," I can hardly agree. Antrum disease is not so frequent among you as it is among us, but they are not necessarily connected with necrosis or suppuration; and I know that what I have said as to its being a very frequent trouble is true. With reference to the extension of inflammation, I think Dr. Luckey does not pay enough attention to the circulatory apparatus which underlies the mucous membrane, the blood vessels and nerve supply, which are liable to disturbance. I will agree with Dr. Luckey

that it is comparatively rare that we have disturbance of the pulp; if the tooth is not contiguous to the antrum it may escape; if it is contiguous to the antrum it is much more liable to attack than a pulp that is some distance away, as, for instance, in the lower jaw.

About the "grippe toothache" of which Dr. Sanger speaks, I have based my whole paper on my observations of the grippe in 1891, '92 and '93, and upon my experience at that time. You will remember, if any of you had the grippe or earache, as many of you probably did, that you had what you call a rupture of the drum and discharge from the ear. I saw many of these cases during the epidemics of the grippe—not that I know they were all suffering from the grippe—but there were present the symptoms of genuine grippe, periostitis, and inflammation of the external auditory canal, in the soft, porous bone. There was fever, rise of temperature, and all the symptoms of grippe. I observed many of these cases in children; periostitis, involving the external auditory canal and affecting the bone, and extending also to the Haversian canals. I think there is no doubt that the danger of colds from antrum inflammation affecting the teeth, is much greater where the teeth have previously been affected.

Second District Dental Society.

March Meeting.

A regular meeting of the Second District Dental Society of the State of New York was held on Monday evening, March 14, 1898, at the residence of Dr. F. S. Emerson, No. 140 Wilson street, Brooklyn, N. Y. The president, Dr. O. E. Houghton, occupied the chair. Dr. F. L. Dolbeare read the essay of the evening, entitled "Cocaine; its Action and Therapeutics," which is published in this issue. The following discussion ensued:

Dr. Barker. I had expected to have the subject of my remarks here this evening, so you could examine his mouth, but he did not come. In his absence, I will do the best I can. It is quite apropos of Dr. Dolbeare's paper this evening, supposed to be a case of cocaine poisoning.

The patient, a man of German birth, aged 36, a painter by trade, became a cocaine habitué, and continued the habit about ten months.

At that time he was taking four or five injections per day, of a 10 per cent. solution, 15 drops per injection. When the habit had continued seven or eight months, the teeth of the upper jaw became painful, and loosened so much that he extracted them with his fingers. Pieces of the alveolus sloughed off with the teeth, and continued to come away afterwards. How many teeth were thus lost, he is not now certain, but all of the upper ones were lost. I have here a few of them with portions of the alveolus attached. The lower teeth were not affected, and none were lost then or since. The holes made by the loss of the teeth and bone are still present. On the left side, in the region of the cuspid, is a large hole through which one may look into the nasal passage. On the right side is a hole smaller than the other, which opens into the antrum. Previous to this attack, he had not lost more than two or three teeth, and they had been lost years before, in the usual manner, and without any similar symptoms. The teeth in the lower jaw show no sign of being affected, and are quite free from pyorrhea. I am informed by his physician that there is no reason to suspect syphilis, or any similar disorder.

The man's physician, Dr. Luce, is superintendent of the institution at Amityville, and is here this evening; he will be glad to give any points that I have not given in these notes. The case has been, so far as the making of the artificial denture is concerned, in the hands of my assistant and while it may seem to be a very difficult case to fit—to make the denture stay in place—he has succeeded very nicely indeed. I greatly regret that the patient is not here. He has no ridge at all to the alveolus, and ordinarily you would not get any adhesion to the plate. The plate is retained, however, by having the upper edge of the rim brought down and curled over, so that the labial and buccal muscles get a grip on the under side of it and hold it up. Another interesting feature, is the fact that he has lost two molars, and one bicuspid, on the right side of the lower jaw, and none on the left. To make a one-sided denture and make it firm, is not an easy task. It was accomplished by swedging a thin cap of metal to fit over the second bicuspid and the two molars on the opposite side. They were swedged on fusible metal dies, so they fitted very snugly, then a cap was soldered on, running into the rubber on the right side, so that holds it rigidly.

Dr. Luce. I do not know that I can give you very much information. The patient was using cocaine and morphine hypodermically, for rheumatism, as he said. He used half an ounce of morphine in 24 hours, when he first came to us. Part of the teeth were intact; two or three incisors were lost very soon after he came. He just pulled them out with his fingers, as they were very loose. That left cavities on each side, which were very small

at first; the fluids which he drank would come through, so he kept cotton in place, and that necessarily made them grow larger. As to the cause I cannot say, because he did not give any definite history of any trouble. Before he commenced using cocaine or morphine, his teeth were perfectly sound. I asked him about syphilis, or the use of mercury, but he denied anything of that kind. He was all scarred up from the needle, but I did not think there was syphilis or any trouble like that. We kept him for about two months; since that time I have not seen him.

Dr. Hill. Do you think the cocaine had anything to do with it?

Dr. Luce. He said when he used the cocaine, he felt it in his upper teeth. I can give no reason why he should, but that is what he said—that when he injected it, he could feel it in his mouth. He says his teeth were good before he commenced using it.

Dr. Barker. I questioned him closely about that, and he said he had not lost any of the teeth before taking the cocaine. He had no pyorrhea, and the teeth were very healthy.

Dr. Jarvie. Why may it not be that the condition of the processes caused so much discomfort as to induce him to take morphine or cocaine? Why should not that be just as much the cause for his taking the cocaine, as having taken the cocaine being the cause of his losing the teeth? I see no connection between the loss of the teeth and the use of the cocaine. Is it not as reasonable to suppose that he took the cocaine for the pain, as it is to suppose that the loss of the teeth was caused by the cocaine? I do not see that the exfoliation is caused by the cocaine, or how it is possible for that result to take place in the mouth, from injections of cocaine. Certainly the processes about the two centrals look almost like a breaking away. From superficial observation or examination, there is no evidence of necrosis. They are very thin where the separation has taken place in the alveolus, but I doubt if the cocaine had anything to do with the loss of these teeth.

Dr. Brockway. Did the patient give any reason for using these drugs in that quantity?

Dr. Luce. He said he used the cocaine to stimulate the action of the morphine.

Dr. Brockway. Why did he take the morphine?

Dr. Luce. He took the morphine first to relieve pain from rheumatism, and then got in the habit of using it.

Dr. Barker. In conversation with the man, he said that the rheumatism was in his feet. He did not say anything about morphia to me. He got into the habit of using the drugs through his physician. He saw how easy it was for the physician to inject the medicine, and he thought he could do it himself, and naturally, as in all such cases, he gradually increased the dose. It is mysterious that the teeth should have been lost through the use of cocaine, and yet we cannot account for it in any other way. Naturally you would suspect syphilis, and that was the reason that prompted me to write to Dr. Luce and ask him about it. If he had syphilis at the time he lost his teeth, he would have it yet, because he has received no anti-syphilitic treatment; but there is no evidence of the disease. It might have escaped your notice, when I read the notes, that not only the teeth came away, but also pieces of the alveolar process sloughed off after the teeth came out. He could pull them off with his fingers.

I would like to ask the essayist, if in his judgment cocaine should be used alone by hypodermic injection, or combined with other drugs to counteract its cardiac depressing effects.

Dr. Dolbeare. There is a tablet put up by Parke, Davis & Co. which can be dissolved in a certain quantity of water, making various strengths of solution; but I do not know that I said anything in my paper about cocaine being a cardiac depressor. Its action is more marked on the brain. I prefer not to use local anæsthetics myself. The first experience I had with them was about ten years ago, when I was out West, and I did not have the advantage of society meetings, and was glad to get anything to help me in my work. A man came in to sell me a local anæsthetic. He would give me the recipe and I could have it put up. It contained cocaine, carbolic acid, hydrate of chloral, and water—small proportions, about enough to make six drams. He could not write out a prescription; he simply wrote down the drugs and the quantities and gave me a receipt for $30 for the paper. This was to be used by hypodermic injection, and it worked very nicely; but my fund of knowledge has always made me afraid of doing things that other men succeed in empirically. I read a few weeks ago of a patient in Bellevue Hospital, who had a hypodermic injection in his arm and died twenty-four hours after. A physician in Albany died from an overdose of cocaine. Cocaine acts most powerfully on the mucous membrane of the eye, then on the nose, then on the throat, and the farther down you go the less active it is.

Dr. Schleich, in his review which I quoted, in five hundred operations infiltrated the tissues with his saline solutions. He raised, as the dentist does in his injections, a welt, and the first incision would let out at least half of the injection.

Dr. Ferris. What do you consider the chemical antidote to cocaine?

Dr. Dolbeare. In case of poisoning from cocaine, you want to do anything you can to stimulate the respiration. You can switch the patient with wet cloths, dash water in the face; give amyl nitrite, or injections of caffeine.

Dr. Ferris. What would be a chemical antidote?

Dr. Dolbeare. I do not know. I read Dr. G. Lenox Curtis's article, but did not give it thorough attention. The cases in which I have seen cocaine used, were cocaine habitués—men who had taken morphine and got frightened at the large doses and then taken cocaine, and so they would go back and forth, first one and then the other. When you get below par, there is nothing to bring you up. The men that depend on drug stimulation are never at ease.

Dr. O'Brien. What do you think of lyco-opium compound?

Dr. Dolbeare. I do not think it would be quite quick enough, Cocaine acts so much quicker than anything else. The best way to do is to withdraw it. If you have a man who is taking cocaine, keep it away from him.

Dr. O'Brien. I mean after injecting cocaine. I have had patients show symptoms of poisoning. After I got the teeth out, and they had had no pain, they said they felt very badly. A German in the chair one day grew very pale, broke into a cold perspiration, and said he wanted to vomit. I gave him ten grains of lyco-opium and plenty of air, and he recovered.

Dr. Dolbeare. Some people use excessive doses of opium and cocaine, and one counteracts the effect of the other. They are physiologically antagonistic.

Dr. Ferris. I believe the Brooklyn Society of Chemistry has been working on this subject, and I learned from one of the Board of Health, of this city, that they have determined that chloral is a chemical antidote to cocaine. We find most of the physicians have in their offices a strong solution of chloral in case of any cocaine poisoning. From the time I heard of that fact, I have provided myself with a strong solution of chloral, and have it ready in case I should need it as an antidote to any poisoning by cocaine administered hypodermically.

Dr. Hill. How much do you give?

Dr. Ferris. I think it is twelve grains per dram in solution. I think the maximum dose would be a dram; that would be a very powerful dose of chloral, of course. You give at least twelve grains of chloral.

Dr. Halsey. In considering cocaine, the dentist should give a great deal of thought as to how much he needs cocaine in his practise. There is occasionally a case where I need cocaine and where I use it; but it is a rare exception. When we use an anæsthetic of any sort, there are a number of things to be taken into consideration. If we must remove a bit of gum over an inferior wisdom tooth, it is a painful operation, unless we have some means of anæsthetizing it. Shall an injection of cocaine be used, or a general anæsthetic? I think there is less risk in using nitrous oxide than in injecting cocaine. The chloride of ethyl is superior to my mind in the front of the mouth. I recently took out a lateral incisor, where the root was split two-thirds of the way up. Through a severe blow, the crown was dislodged and the root split. I took that out with an elevator and chloride of ethyl, with absolutely no pain to the patient. It is penetrating, and will drive all blood from the part. I use cottonoid, which comes in sheets, folding it over; cut a square hole in it, and you can isolate the tooth and get the effect of the ethyl just where you want it. Of course, you cannot do that with a wisdom tooth. We can avoid using cocaine in many cases. I do it, but with exceeding care. Unless I know my patient very well, I would give nitrous oxide in preference to it.

Dr. Ferris. Have you ever had a frostbitten gum from chloride of ethyl?

Dr. Halsey. Occasionally there would be a little after inflammation, but it is surprising how much freezing the gum tissue will stand. I have used the spray until I have driven it three-eighths of an inch above the gum margin; you can remove a badly ulcerated tooth without any trouble at all, but you must do it quickly, or the circulation will be restored. You must protect the patient's nostrils from it, however, or it will act as a general anæsthetic.

As to the cocaine, there is no question about its physiological effect as an anæsthetic. When I was a boy, I was sliding down hill and broke my nose. The septum was curved to the right, so that in after years there was a cartilaginous growth, and I had some trouble from the closing of the passage. I went down to Dr. Coon's, on Montague street, and he used an electric engine with a trephine, and a great deal of cocaine. Going home, on the car, I felt a very peculiar sensation in my teeth. Three or four hours afterwards, the teeth had no sensation whatever.

Dr. Hanning. Last year, at the New York Odontological Society, I saw a case of necrosis produced by the chloride of ethyl. Some dentist in Long Island City had anæsthetized the gum and removed the four incisor teeth painlessly.

After a few days resorption of the gum took place, and when the case was presented, I think by Dr. Cady of the DeMilt Dispensary, a great deal of the bone had been lost. That is practically what it is—a freezing of the gums. He did it, and the patient lost the gum, the process and part of the maxilla.

Dr. Van Woert. What evidence have you that the chloride of ethyl was the cause of the necrosis? Even if it did produce sloughing of the soft tissues, would necrosis necessarily follow? Do you know that the chloride of ethyl did that?

Dr. Hanning. Dr. Cady brought it there and gave it as his opinion that the necrosis was produced by the freezing.

Dr. Van Woert. I do not see how it could be.

Dr. Royce. At the hospital, I had a case of amputation of a finger, where a man had necrosed bone down to the first joint. The physician came to me and said the patient was one to whom he did not want to give either chloroform or ether, and asked if I had a local anæsthetic. I suggested chloride of ethyl and I gave it to the patient, so there was hardly any flow of blood, while the operation was performed, and the finger healed without any trouble. I never had any case of necrosis brought on by the use of chloride of ethyl.

Dr. O'Brien. I will speak of a non-poisonous anæsthetic. I have not used cocaine for about two years. I got frightened. Just about the time I gave it up, I met a friend who is also a dentist. We compared notes, and he said he was using cocaine. I said, "Look out, or you will get into trouble." He said he never had any difficulty, but finally he did get into trouble. Next time we met we spoke of it again, and now whenever a patient comes to him and asks for cocaine, he gives him distilled water.

Dr. Van Woert. If there is any warning to be given to the dental profession, in regard to an anæsthetic, it may better be in the direction of chloride of ethyl, than of cocaine. I handle a few people in my practice, and I have yet to see the necessity of injecting cocaine hypodermically.

Dr. Dolbeare. I have had read to me the French, German and English authorities, and I have read the history of many cases of poisoning, which would not interest the gentlemen here. I thought they could read between the lines. Every physician knows that hypodermic injections, even of distilled water, are sometimes apprehensive in their effects. I quoted one case of a woman having an attack of syncope. If the dentist had been conscious of giv-

ing some drug, he might have been alarmed; but having given distilled water, he was simply conscious stricken. Almost every dentist has entreaties from his patients for a local anæsthetic, and we are to blame. I was introduced to you as the son of my father, and some of the older members knew him for many years. I personally can swear that he never used local anæsthetics. How successful he was I do not know; but he accomplished many operations that I would be proud to do. I never used local anæsthetics very often. I cannot find one to use, unless it is the chloride of ethyl. Ether or any of those very volatile compounds that owe their anæsthetic property to their rapid evaporation, give little after results of pain. It is very serious to inject into the human economy some of these active poisons, of which we are uncertain what the result will be. I could report a case where ten minims were injected with fatal results.

Christian Science in Dentistry.

In this issue appears an article by Dr. Chas. L. Van Fossen, who advises his confreres to utilize "Christian Science" in dentistry. Many will probably read the article, and sneer; these perhaps have heard of Christian Science fanatics who have allowed helpless children to die unattended by medical aid, while heaven was besieged with prayers for the recovery of the ailing little one.

Is it wise to thus cavalierly dismiss a theory, merely because a few bigoted adherents have brought it into disrepute? If there is any science which promises to assist the dentist in his work upon some of the most sensitive organs of the body, surely it becomes his duty to investigate, whether the science be called Christian, or by some other name.

The following dogma may be enunciated with little danger of refutation: "Any idea which is firmly believed by an appreciably large number of seemingly sane persons, must have some basis of truth." From this postulate we reach the following corollary: "Christian Science having thousands of firm adherents, must have a foundation in fact, and at least it would be time not wasted to search for and discover the extent as well as the limitation of that fact."

Limitation of Christian Science.

To one who may investigate this fascinating subject, with a mind free from bias, wishing neither to believe nor disbelieve, two facts will attract attention. The literature of Christian Science, that is to say, the books which have been written wholly in favor of the theory, abound with sophistry, and there will be found an admixture of truth and falsity which is marvelous when we remember that the authors of these works are preaching from a pseudo-religious platform. Secondly, it is of interest to note that among the disciples, those who know least of the science make the greatest claims for its efficacy. Indeed, it is this class which makes such irrational boasts that the ordinary mind is repelled, and, jumping to the opposite extreme, declares that the whole theory is preposterous and impossible.

The fanatical Christian Scientists point to the records of the miraculous cures effected by the Christ; remind us that He transmitted this power to heal the sick to His disciples; and finally assert that it is only needful to truly believe in Jesus to be able to perform the same curative miracles which He did. When the most ardent of these fanatics is asked to "raise the dead," or to "make the blind to see," he merely tells you that his inability to do these things is due to the fact that he has not yet sufficiently purged himself of the sins committed before he "accepted the Lord." Nothing weakens his faith in the theory.

The dentist, as a practitioner of the healing art, anxious to understand all healing arts, may consider Christian Science, so called, with the word "Christian" entirely eliminated. It will not be needful to discuss the religious aspect of the theory at all. Without denying that what the Christian Scientist does is due to his Christian faith, it is only necessary to note that all the recorded miraculous achievements of the Christian Scientists have likewise been successfully and repeatedly performed by Mohammedans, Chinese, Japanese, Persians, Egyptians, North American Indians, ancient Mexicans, African bushmen, the Hebrew Priests, and the Chaldeans, in order to arrive at the logical deduction that the true science is common to them all, and that the religion is merely an accessory which aids in the work, not being at all the fundamental principle.

The Underlying Principle Expounded.

If we read the Christian Science books (Mrs. Eddy's being a good one to begin with), certain simple doctrines will be noted which appeal to the mind immediately as reasonable. For example: The Christian Scientist tells us that the first requisite for returning health is that the patient's mind should be filled with the idea of health rather than disease. It is therefore highly injurious to permit visitors and friends constantly to converse about other sick people or other sicknesses. This brings an atmosphere of disease into the patient's room. Those who come in cheerfully and tell of friends who are enjoying great health, speak of the beauty of the fields, of the flowers, of the streets, of the shops; in short, those who talk of life and health and strength, are bound to enliven and strengthen the patient. They bring an atmosphere of health with them. Of course they do not actually bring it with them, for "an atmosphere of health" is not exactly a tangible thing. Yet however intangible it may be it is real, and none the less invigorating to the sick one. Why?

The secret lies in the tremendous influence which the mind ever exerts over the body. A simple illustration may make this clearer. Let us suppose that the patient is taken ill with a violent cramp, and is suffering to such an extent that he has become somewhat alarmed at his condition, and that a physician has been summoned. A friend (?) enters and, after extending a few words of sympathy, remarks:

"I don't like those violent cramps you have. You know that ice cream we had last night? I'm glad I did not eat any. It seems that it was poisoned; dirty cans, I believe. Anyway, two children have died and several others around the neighborhood have cramps."

It is not difficult to believe that such a statement would have a most deplorable effect upon the patient; his cramps would increase in violence at once. Then let us imagine that a second friend should arrive at this juncture, and with a laugh should exclaim:

"What! You have cramps too? Well, at any rate you have not the excuse of the others. It turns out that that report about poisoned ice cream is all rot. The children who died had gorged themselves with green apples, and the other folks are all over their little attack of 'summer complaint.'" Undoubtedly the patient would feel much better very promptly.

The psychological fact involved here depends upon what has been called the "expectant attention" of the mind. It can be proven that "attention" plays an important part, not only affecting the emotions, but exerting true physiological influence upon the various organic centers. A very simple experiment will demonstrate this.

If twenty persons be told to think intently for five minutes, of a particular finger tip, at the end of that time probably fifteen will report the experience of definite sensations, and these sensations may be to some extent made dependent upon the expectation. Thus the part may feel hot or cold, swelled or shriveled, etc. If expectation be eliminated, the patient being passive, and the operator having thrown out no suggestion, the majority will report heat, because prolonged attention influences a greater flow of blood to the part. Another simple experiment will prove this. Place a bit of cotton saturated with anything—water will serve—upon the gum over an abscess needing to be lanced. Tell the patient to be perfectly still for three minutes and that then the abscess may be lanced painlessly. Hold the cotton with one finger and allow the other to rest upon the coronary branch of the facial artery where it passes up over the inferior maxillary. The pulsations of this artery may be readily counted, and the patient will have no suspicion of the fact. The patient's attention throughout the long three minutes will surely be directed to the area under treatment. The pulse will increase in each minute, going up as much as ten beats in very anxious individuals. Usually the lancing will be painless, or practically so.

Expectant Attention and Suggestion.

A full comprehension of the phenomena of expectant attention will enable any dentist to better manage his timorous patients. Coupled with this he should have a scientific knowledge of "suggestion." In almost every operation in the mouth the dentist is compelled to combat expectant attention, which opposes his progress. The patients, especially young patients, come dreading the operation. The mind is centered upon a particular tooth, and the expectation is that pain will certainly result when that tooth is touched. If nothing is done to divert the attention and alter the expectation, pain will be felt, no matter how gently the tooth be touched. Is not this a remark familiar to all of us?

"Doctor, that tooth is dreadfully sensitive. I wish you would see what the trouble is, but oh! don't touch it!"

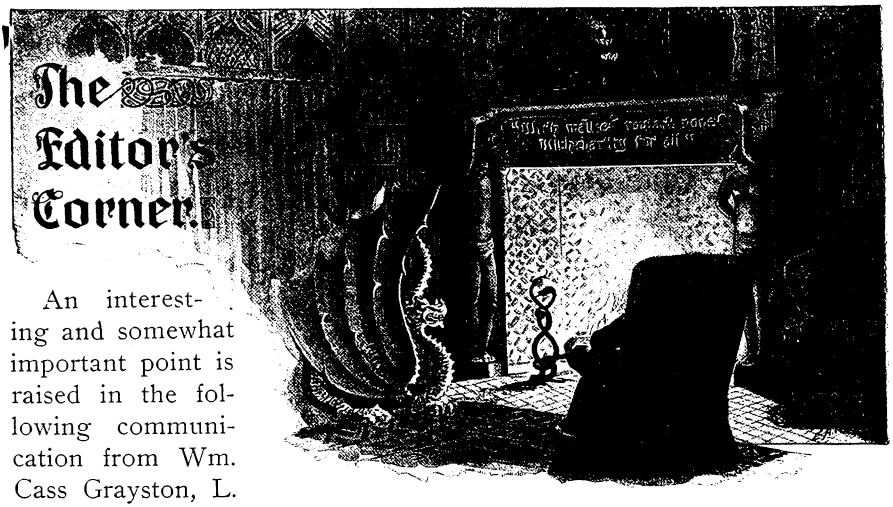
How may we utilize our knowledge of the phenomena of expectant attention in such a case? Promise faithfully not to touch the tooth, and keep the promise. Use a mouth mirror only, and remark "Oh! I guess that won't be much when we come to it, but what about this tooth on this side? Has that troubled you any?" The patient's attention is diverted. Talk of other teeth, then of other things, and presently at an opportune moment, in the most casual tone of voice, everything having been prepared meanwhile, say, "I'll just put a little medicine in that tooth for a minute or so, and then there won't be any pain when we come to work on it." This is said in a tone that indicates a certainty that what you are about to do will be painless, and it is important that the application should be placed so lightly as to cause absolutely no response. This at once dulls the expectation, and half the battle is won. In many instances by using similar diplomacy, fairly sensitive teeth may be prepared for these patients who at first will not permit the tooth to be touched. Of course psychical processes of this character are not as positive in action as are physical remedies, but they will be efficacious in proportion as they are utilized intelligently. While such methods are not suggested as a substitute for cataphoresis, even the applications of cataphoresis may be rendered more effective in this manner.

In this connection the whole theory of suggestion should be well comprehended. Those who have not studied the subject, or who have but given it passing attention may connect suggestion with hypnotism, and understand it to be the trick of compelling a subject to perform the acts which are suggested. The hypnotic subject merely follows suggestion more responsive than the waking individual. All persons are amenable to suggestion.

Suggestion is not limited to the mere telling of a person to do a particular thing. Indeed in psychical science the term is used in a much broader sense. Examples of suggestive influence are about us at all times. We see several persons turn their heads to look in a certain direction, and we turn ours. That is suggestion. We look at the street thermometer and see the mercury at ninety-eight; at once we feel thirsty. The druggists who sell soda water understand this and place the ther-

mometer at their doors. This is suggestion, and more potent because unsuspected. A boy at the druggist's door calling out "Ice cold soda inside" would not attract half the custom. We see ripe peaches for the first time and in imagination we taste them, and "the mouth waters." An example of psychic suggestion, together with an evidence of the influence of the imagination upon the organs of secretion.

Such instances could be multiplied indefinitely, were this the proper place. The object here is solely to call the attention of the progressive dentist to the fact that it would be time well spent to inquire into the phenomena here indicated, because a thorough knowledge of the principles involved will lighten his patients' pains and his own labors. A work which fully elaborates the medical aspect of the whole subject of psychical treatment and cure is entitled "Influence of the Mind upon the Body," by D. Hack Tuke, of London, England. The American edition was published in 1884 by H. C. Lea's Sons & Co., Philadelphia.



An interesting and somewhat important point is raised in the following communication from Wm. Cass Grayston, L. D.S., of Scarborough, England, the book referred to being entitled "Methods of Filling Teeth."

"In your book on operative dentistry you allude to the impossibility of making perfectly adapted fillings of cohesive gold in smooth glass tubes. You state that the slight roughness left by the use of burs or excavators in preparing cavities in teeth enables tighter fillings to be made. My own experiments bear this out. I can not make a perfectly adapted cohesive gold filling in a smooth glass tube. I have succeeded in doing this in cavities cut in glass with a Butler carborundum point. Does not this show the inadvisability of making enamel margins as *smooth as possible*, and the futility of attempting to polish them? Chisels, rapidly revolving burs, and stones of coarse or medium grit, would appear from the above experiments to be all that are necessary or advisable. This is merely a suggestion, not a dogmatic statement."

Treatment of Cavity Margins.

There is little doubt that it is a fact that gold cannot be packed in a glass tube, with any hope of obtaining absolute adaptation along the polished walls. Perhaps some who read this statement may be inclined to doubt its truth, but before making a claim to the ability which is here denied, it will be wise for such individuals to fill glass tubes (one end set in phosphate cement to form a bottom), and then to break the glass and examine the surfaces of the fillings. It will require no magnifying glass to detect the imperfections. If the adaptation is perfect the gold should have a surface as polished

as the glass, for if the same tube were filled with phosphate cement, the cement filling when removed would show a glazed surface.

The point raised by Dr. Grayston, while somewhat analogous, does not bring with it the same conditions. The gold packed in the tube cannot well be packed against the polished sides at anything approaching a right angle, whereas when we pack against the margins of cavities in the teeth, the instrument packs the gold directly against the margin at as near a right angle as feasible. For this reason it would be possible to better adapt gold against polished margins than against polished side walls. Nevertheless, this is only true in a relative degree, and it would be better not to attempt too much polishing of margins. What is required is that the margins shall be smoothed to such an extent that the operator is certain not only that no real roughnesses are left, but also that there will be no tendency to crumble under the strokes of the mallet. It is improbable that any dentist ever succeeded in making cavity margins polished in the sense that glass is. Yet occasionally such a condition might arise, and it should be avoided. These glazed margins would occur when filling deeply eroded places, especially in the occlusal surfaces. Here one might be tempted to merely cut retaining grooves, leaving the glazed eroded surfaces along the margins. It will be safer to bur out the entire cavity, margins included, with sharp gold-finishing burs.

Dental Joys as Described by a Patient.

The following "feeling" description of the joys of a dental operation is forwarded by Dr. Charles S. F. Lincoln, a medical practitioner of Louisville, Ky. The doctor evidently gave vent to his pent-up feelings immediately after the dental seance:

"My friend, the dentist, is really a very good fellow and a perfect gentleman, and it is only in his professional capacity that he sometimes becomes insufferable. I know this to be a fact, because I have just been in executive session with him.

The day has been intensely hot—the thermometer way up in the 90's, but he had to stand it; there was a certain amount of consolation in that fact.

We are the best of friends in private life, as we were in college together, and have many friends in common; so after we had talked a few minutes, while he was preparing for the slaughter, I took the chair and he began to be obnoxious.

I know perfectly well that his feelings toward me are the kindest in the world; that he is doing it all for my good, and that I have, of my own free will and accord put myself in his hands, but when I am suffering it is hard to keep those facts always in mind. After a cursory survey of the field, like a general about to give battle, he placed around my head a

band, to the ends of which was attached a piece of thin rubber, very appropriately called "dam," through which he pushed the offending ivories, put on a metal clamp, which should also be called "dam," to prevent its slipping, and tied waxed silk about the roots, way up in the head somewhere, out of sight, but never out of mind; then he began to excavate in the anterior surface of a second upper bicuspid. There was no gold at the bottom of that insignificant little hole, nor was any to be put in there, and yet he dug with the enthusiasm of a Klondike miner who has struck a streak of "pay dirt" under a layer of frozen ground. Occasionally he would have to break off an infinitesimal piece of frozen earth, I mean enamel, but it felt as big as a clod; then he would burrow and scrape in the soft earth, I should say dentine, and suddenly strike a nerve. I never failed to notice it, for it thrilled me through and through, and a creepy feeling like that experienced by an inhabitant of the Arkansas river bottom on "chill day" stole up and down my spine. All this was done with a little excavator, which might properly be called a dental pickaxe. The former name will probably be retained by historians and educators for obvious reasons.

Then, to get the debris out of the way and see how he was progressing, he took a little syringe, which he industriously filled with hot air over an alcohol flame, and, with a dexterous squeeze, sent that miniature blast from the Inferno into the aforesaid microscopic hole.

Both the blast and the hole instantly assumed enormous dimensions, and the Recording Angel tearfully scored one for the opposition. Following this inquisitorial practice, which would have turned Torquemanda green with envy, he took up something which looked like a cross between a snake and buggy whip, emerging from a neat looking metal ball which conceals a little electric motor. The whole apparatus is, I believe, called a dental engine. In the business end of the snake-like attachment is another subtle invention of the Adversary, called a bur, whether because of its tenacity in sticking to its work, or by antithesis, because the longer it works the less one is stuck on it, I know not. That little bur walked round the excavation, then it waltzed and maneuvered in circles, occasionally stopping to try conclusions with some resisting hump, or rudely running into or over the tender extremity of a nerve. This exercise was interspersed by blasts from the fiery pit in guise of the innocent looking but pernicious hot-air syringe, and punctuated on my part by the most eloquent expressions of suffering of which the hands and feet are capable. I have often looked at Dore's illustrations of the "Inferno," and the one in which a choice collection of feet, in positions indicative of pain, are sticking up through holes in the hot earth, was always an object of pity and speculation to me. Now I know what those feet expressed.

At last, having artistically smoothed down the walls of the cave, he wiped it out with pure carbolic acid for the beneficent purpose of killing any hardy bacterium of decay that had by chance survived the terrible assault on its fortress, and again with absolute alcohol to render it perfectly dry, as well as to supplement the action of the carbolic, and, finally, my brethren, he put in the cement, smoothed it down and left it for a few minutes to harden, while I wiped off my chin and entertained a fellow feeling for the baby who is cutting teeth. Then I arose from my perilous position, and we were friends once more.

By the way, I should like to be put on a committee to revise the nomenclature of dental instruments. It is much too inexpressive at present.

Shortly after, another victim arrived and I had so far forgotten my anguish as to make another appointment with him for next week.

Bill Against a Minor Collected.

The following is reported by a correspondent in Lowell:

"On May 25th the full bench of the Supreme Court of Middlesex County, sitting at Lowell, Mass., handed down a decision for the plaintiff in the above case.

"The case in question was the result of the defendant's neglect or refusal to pay a bill of $15 contracted by his minor son, Charles F., Jr.

"The case was first tried in the Lowell Police Court. The evidence showed that the minor son of the defendant, who since died, went to the plaintiff with an aching tooth, with the understanding that his father would be responsible for the debt contracted. The dentist, knowing that the young man's father was a man of well-to-do means, took the responsibility upon himself to fix the young man's teeth. The young man also said 'that his father would send him a check as soon as the work was done and the bill was received.'

"This was about four years ago. In the meantime the doctor sent numerous bills to Mr. Varnum, his envelope bearing on the outside, 'If not called for within five days return to Dr. E. F. Lamson,' showing that Mr. Varnum received them. There being no attention paid to them the doctor entered suit.

"In the Police Court Judge Hadley found for the defence, saying that he couldn't find for the plaintiff, but claiming that he thought Mr. Varnum would pay the bill as a debt of honor; and the case went to the Superior Court on appeal of the plaintiff.

"When the case was tried before a jury in the Superior Court, judgment was returned for the plaintiff (Dr. Lamson), who was awarded the sum of $20, including the original bill of $15 and interest. The defendant, not being satisfied with the decision, took the case to the Supreme Court on exceptions which were finally overruled. The result was that Dr.

Lamson won his case, and it cost Mr. Varnum $61 for the costs of the case, in addition to the Superior Court's award of $20."

Error Corrected.

The following letter is self-explanatory:

"I have just received the June number of ITEMS OF INTEREST, and notice that the title 'Dr.' has been given me. The translator no doubt rendered the word 'Zahnarzt' by 'Dr.' In order to avoid misunderstandings, please publish in your next number, as coming from me, that I am a dental surgeon, licensed in Germany, but am not entitled to 'Dr.' and never used the title.

"Respectfully,
DENTAL SURGEON ROBERT MARCUS.

"Frankfort-on-Main, June 12, 1898."

Dr. Alfred P. Southwick.

Alfred Peter Southwick, M.D.S., died at his residence in the city of Buffalo, June 11, 1898. He had been ill for three weeks, suffering intensely at times from a carbuncle which developed on the back between the scapulæ. The tumor was the largest of the kind in the experience of the attending surgeons, due probably to the low vitality of the tissues which were surcharged with sugar.

During the patient fight against septicemia, the doctor often was called upon to endure pain which was so unbearable that it was necessary to relieve his sufferings with chloroform.

The following account of his life is taken from the pages of "Men of New York."

Dr. Southwick was born in Ashtabula, Ohio, and spent his youth there, acquiring a high-school education. Soon after attaining his majority, however, he left his native place for the greater advantages apparently offered by Buffalo. This was in 1849, in the early days of steamboating on the Great Lakes, when there were no railroads to compete for business to the West. Buffalo was then pre-eminently a commercial city, the terminus for all lake traffic, and naturally an attractive place for an ambitious and pushing young man who had already learned something of the duties and responsibilities of a steamboat engineer. For sixteen years Dr. Southwick devoted himself to the engineer's vocation, finally reaching the important position of chief engineer of the Western Transit Co.

Even then his ambition was not satisfied. He had reached the top of his calling, but he felt that there were better things in other directions. After some hesitation he took up the study of dentistry, and in 1862 he decided that it was time for him to make a name for himself in his chosen profession. A successful record of over thirty years, broken only by the lapse of a twelvemonth, has made him one of the best known members of the profession in the State. He was active in the organization of the State Dental Society in 1868, and was one of the first candidates for a diploma to appear before the Society's Board of Censors. In 1877 Dr.

Southwick was elected to that board, and became soon afterward its president. He retained the presidency until August 1, 1895, when the law was changed, creating a Board of State Commissioners, and Dr. Southwick was made president of this board. When the department of dentistry of the University of Buffalo was organized, Dr. Southwick, by reason of his long experience and undoubted ability, was chosen to the important position of clinical professor of operative technics.

Though dentistry has been Dr. Southwick's profession, it has by no means been his only occupation. To Dr. Southwick is due the law that substituted electricity for the rope in cases of capital punishment in the State of New York. Becoming convinced that hanging is brutal, he promulgated his views as widely as possible, and the agitation traceable directly to him resulted in the creation of a State commission "to investigate and report upon the most humane and practical method of carrying into effect the sentence of death in capital cases." The members of this commission were Elbridge T. Gerry, Alfred P. Southwick and Matthew Hale. They reported in favor of killing by means of the electric current, and in face of the greatest opposition their recommendations were adopted. Dr. Southwick in this way won the *sobriquet* of "Old Electricity."

He married Mary M. Rockwood, who died about two years ago. An adopted daughter, Mary, survives him.

Resolutions on the Death of Dr. Southwick.

At a meeting of the Faculty of the Dental Department of the University of Buffalo, called to take action upon his death, it was unanimously voted that the college should be closed until after his funeral, that emblems of mourning should be displayed in it for thirty days, that the Faculty should attend his funeral in a body, and that the following resolutions, prepared by a committee consisting of Dean and Professors Park and Snow, be sent the *Dental Practitioner and Advertiser* for publication, and that a copy be sent the family:

Resolved, That the Faculty of the Dental Department of the University of Buffalo have great reason to deplore the death of Dr. A. P. Southwick. In his school work he was most devoted to all that stands for integrity and efficiency. In his relations with teachers and students alike, he was the soul of honor, while always kind, genial and generous. Never censorious nor critical among his fellow practitioners, he was yet a model by which they might well regulate both their conduct and their practice.

In the history of dentistry in this State, and indeed this country, he will remain ever a conspicuous figure; since from the outset of his career

he strove always for higher standards, and the elevation to the dignity of a profession of what had been scarcely more than a vocation.

In the records of the State Dental Society it will be noted that he was, from its organization in 1868, an active member. For the past twenty-one years he was a censor, guarding faithfully its interests, and joining prominently in every movement that promised progress and improvement in its work.

As a citizen and a man, he was upright, fearless and energetic. Throughout his career he showed always those traits which enabled him early to rise from a humble position to the height which he attained in his chosen profession. Faithful always, active to the last, never weary of well doing, he finally succumbed beneath a burden of disease which few men could so long have carried; and dying after a long and well-spent life, he has left behind him an illustrious example, which all will do well to follow.

This Faculty, therefore, cherishing his memory and keenly feeling his loss, wish to spread this expression of their sentiments upon their records, and transmit it, as well, to his family and friends.

Dr. George W. Baab.

George W. Baab, D.D.S., died at New York City, Friday, June 3, 1898. He was born in New York, receiving his education in this city. His first experience in dentistry was in his father's office, handling the mallet, having to stand on a stool beside the chair. He was graduated from the New York College of Dentistry, with the class of 1888.

Immediately after graduating, he associated himself with his father, and for ten years had applied himself closely to business. His father's death, some eighteen months ago, increased his labors, and the close confinement and subsequent worry attached to settling the affairs of the estate, soon told on his health. He was confined to his bed for the past four months.

He was an active member of the Alumni Association of the New York College of Dentistry, filling several offices to the satisfaction of his fellow members. His widow survives him.

National Dental Association—Southern Branch.

In many of the States the law does not require a diploma as a prerequisite for license. These *State Societies* which admit to membership all licensed practitioners, *regardless* of *diploma*, should therefore bear in mind that only their graduate members are entitled to election as delegates to the National Association and its branches. It should be made very clear that according to the Constitution these bodies accept as *new* members only *delegates* elected by ballot at a regular meeting of the State Societies, and also that delegates must be *graduates* in dentistry or have acquired the degree of M.D., or have entered the profession prior to September, 1875. The American and Southern Dental Associations, did also, it is true, require graduation as a prerequisite for membership, but as they did not restrict their eligible applicants for membership to *elected delegates* from *State Societies*, this feature should therefore be emphasized. The requirements for membership in a Branch of the National must necessarily be the same as in the National itself, as membership in the former confers membership in the latter. The above applies both to qualifications and to dues, which are $5.00 in either case, but it should be borne in mind that if the dues are paid directly to the National Treasurer this does not pay dues in the Branch, but the payment of $5.00 to the Treasurer of the Branch cancels all financial obligations to the National Treasury for the ensuing meeting, because the Branch forwards to the National Treasurer three-fifths of the dues received. Payment of dues to the Branch therefore insures for a *single fee double membership*, with all the rights, privileges and benefits of *both* bodies, including the joint volume of Transaction.

By request of the President of the Southern Branch.

C. L. Alexander, Cor. Secy.,
Charlotte, N. C.

California State Board of Dental Examiners.

The annual meeting of the Board will be held in San Francisco, second Tuesday in August, 1898. All applicants should notify the Secretary of their intention of taking the examination.

W. A. MOORE, Secy.,
Benicia, Cal.

Southern California Dental Association.

A meeting was held in Los Angeles on June 23d by the dentists of Southern California, for the purpose of organizing a Dental Society.

About fifty members of the profession were present, and organized the Southern California Dental Association, electing the following officers: President, Dr. W. A. Smith, Los Angeles; first vice-president, Dr. H. R. Harbison, San Diego; second vice-president, Dr. C. W. Sylvester, Riverside; treasurer, Dr. J. M. White, Los Angeles; secretary, Dr. L. E. Ford, Los Angeles.

The society is to hold its first regular meeting in San Diego, Cal., on September 2, 1898.

L. E. FORD, D.D.S., Secy.
118½ So. Spring Street, Los Angeles, Cal.

The Joint Convention of the New Brunswick and Nova Scotia Dental Associations.

The Joint Convention of the New Brunswick and Nova Scotia Dental Associations will be held on Thursday and Friday, September 1st and 2d, at Digby, Nova Scotia.

An excellent programme, consisting of interesting and instructive clinics, papers, etc., will be presented. An excursion over the beautiful harbor to the historical town of Annapolis Royal is contemplated, as well as other interesting features, to make the convention thoroughly enjoyable.

A cordial invitation is extended to all dentists to attend our meeting.

U. S. dentists should spend at least part of their vacation in our beautiful provinces.

GEO. K. THOMSON, D.D.S.,
Chairman Executive Committee.
St. Paul Building, Halifax, N. S.

Bi-State Dental Meeting.

The Bi-State dental meeting of the Northern Indiana, and Southwestern Michigan Dental Societies, will be held at Elkhart, Ind., Wednesday and Thursday, Sept. 21 and 22, 1898.

This meeting promises to be one of unusual interest and profit.

All members of the profession are cordially invited to attend.

F. P. ADAMS, Secy.,
Northern Ind. Dental Assn., Elkhart, Ind.

Minnesota State Dental Society.

The Minnesota State Dental Association will hold its Fifteenth Annual Meeting in St. Paul upon Sept. 6, 7 and 8, 1898. The sessions will be held in the club rooms in the Endicott Arcade Building.

An interesting programme is being prepared. There will be reduced rates upon all railroads, as it will be during the State Fair week. All members of the profession are invited to come and meet with us and have a good time.

H. L. CRUTTENDEN, Secy.

Lebanon Valley Dental Association.

The twenty-third annual meeting of the Lebanon Valley Dental Association was held jointly with the Harris Dental Association, at Lititz, Pa., May 17th and 18th, 1898.

The following officers were elected for the ensuing year: President, R. R. Underwood, Lancaster, Pa.; Vice-President, E. P. Kremer, Lebanon, Pa.; Rec. Secretary, H. J. Herbein, Pottsville, Pa.; Cor. Secretary, P. K. Filbert, Pottsville, Pa.; Treasurer, C. B. Wagner, Lebanon, Pa.

Delegates to State Dental Society—H. L. Cleaves, R. J. Wall, H. Zimmerman, J. G. Weltmer.

The next annual meeting will be held at Harrisburg, Pa., May 15th and 16th, 1899.

Dental Society of the State of New York.

At the thirtieth annual meeting of the Dental Society of the State of New York, held on May 12th, the following officers were elected for the ensuing year: President, F. Le Grand Ames, D.D.S., Albany; Vice-President, John I. Hart, D.D.S., New York; Secretary, Charles S. Butler, D.D.S., Buffalo; Treasurer, Charles W. Stainton, D.D.S., Buffalo; Correspondent, R. Ottolengui, M.D.S., New York.

North Carolina State Dental Society.

The twenty-fourth annual meeting of the North Carolina State Dental Society was held in Fayetteville, N. C., May 11-13, 1898.

The officers elected for the ensuing year were as follows: President, Dr. C. W. Banner; first vice-president, Dr. E. P. Keerans; second vice-president, Dr. J. J. Battle; treasurer, Dr. D. L. James; secretary, Dr. J. S. Spurgeon; essayist, Dr. J. F. Griffith; supervisor of clinics, Dr. V. E. Turner. The committees appointed are as follows: Executive Committee—Drs. H. V. Horton, D. E. Everitt and J. M. Ayer. Publishing Committee—Drs. I. N. Carr, S. P. Hilliard and C. A. Rominger.

The next meeting will be held in Raleigh, N. C., Wednesday after the first Monday in May, 1899.

J. S. SPURGEON, Secy.,
Hillsboro, N. C.

Washington State Dental Society.

The eleventh annual session of the Washington State Dental Society convened at Tacoma, May 16th to 18th inclusive, the meeting place being at the rooms of the Tacoma College of Dental Surgery.

An interesting meeting was held, which resulted in much good professionally and socially to those in attendance. The President, Dr. R. B. Gentle, of Seattle, presided. The following officers were elected for the ensuing year: Dr. P. H. Carlyon, of Olympia, President; Dr. W. E. Burkhart, of Tacoma, 1st Vice-President; Dr. J. N. Prather, of Seattle, 2d Vice-President; Dr. D. I. Burkhart, of Seattle, Secretary; Dr. J. E. Banks, of North Yokima, Treasurer.

D. I. BURKHART, Secy.,
Seattle, Wash.

Harvard Dental Alumni.

The second Alumni Day at the Dental School was observed Monday morning, June 27, 1898, when nearly 150 visitors registered their names with the committee in charge. Specimens with patients present were shown and the work of the school covering the three classes was exhibited.

The twenty-seventh annual meeting and banquet was held in the evening at Young's Hotel, Boston, with 93 individuals present. Rev. Edward M. Taylor, D.D., Cambridge, Mass.; Prof. Eugene H. Smith, Dean of the school, Boston, Mass.; Prof. Thomas Fillebrown and Harry L. Grant, A.B., both of Boston, were the speakers.

Dr. Grant spoke for the class of 1898.

The officers of the association for the following year are as follows: Frederick Bradley, '86, Newport, R. I., president; Edwin C. Blaisdell, '83, Portsmouth, N. H., vice-president; Waldo E. Boardman, '86, Boston, Mass., secretary; Harry S. Parsons, '92, Boston, Mass., treasurer; Waldo E. Boardman, '86, Boston, Mass., ex-officio, chairman; William P. Cooke, '81, Boston, Mass., and Patrick W. Moriarty, '89, Boston, Mass., Executive Committee.

The council is composed of the above named officers.

WALDO E. BOARDMAN, 86, Secy.

Boston, July 1, 1898.

The Chicago Dental Society.

The following list of officers of the Chicago Dental Society for 1898-99, were elected at the annual meeting, held in Stewart Building, Tuesday evening, April 5th, 1898: President, J. E. Hinkins; First Vice-President, D. C. Bacon; Second Vice-President, E. A. Royce; Recording Secretary, Elgin McWhinney; Corresponding Secretary, C. S. Bigelow; Treasurer, E. D. Swain; Member Board of Directors, J. G. Reid. Board of Censors—A. W. Harlan, W. V. B. Ames, C. N. Johnson.

C. S. BIGELOW, Corresponding Secretary.

Chicago, Ill.